The Mining Journal
RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 611.—Vol. XVII. LONDON, SATURDAY, MAY 8, 1847. [Price 6d.

TO CAPITALISTS.—HIGHLY IMPORTANT AND VALUABLE FREEHOLD ESTATE, MINES, AND BUILDING LAND, at SMETHWICK, in the county of Stafford, fronting the turnpike-road leading from Birmingham to Oldbury, at its junction with Spon-lane.—TO BE SOLD, BY AUCTION, by Messrs. CHESSHIRE & SON, on Tuesday, the 11th day of May next, at Four o'clock in the afternoon, at the Dartmouth Hotel, in West Bromwich, either in one or such other lots as may be determined upon at the time of sale, and subject to the conditions to be then and there produced—all that valuable and rapidly improving MINING and BUILDING ESTATE known as the NINE LEASOWS, situated at SMETHWICK, in the county of Stafford, in the centre of a very populous and thriving district, abounding with large and important works.

The surface of this estate is peculiarly eligible for building purposes, and may immediately be sold off to yield a very large return, and that after allowing a sufficient portion of it to be applied for the purposes of getting the mines.

The estate comprises altogether forty-three acres, and has important frontages to the turnpike-road and to intended new streets, as will be shown by the plans accompanying the particulars. It is situated within a few hundred yards of thick coal mines now being worked, and pits are about to be sunk in the immediate vicinity.

The Birmingham Canal, the proposed Birmingham, Wolverhampton, and Stour Valley, and the Birmingham, Wolverhampton, and Dudley Railways, now in course of construction, pass through the immediate neighbourhood.

The valuable nature of the property calls for the attention of ironmasters, colliery proprietors, and capitalists generally. The proprietor, notwithstanding his present intention of selling the whole of the above estate, reserves to himself, on the day of sale, the power of retaining a portion of the surface for building purposes, in which case it will form the subject of a future sale in building lots.

Lithographed plans may be obtained by applying to Mr. B. Chesshire, jun., solicitor, Temple-row, Birmingham; to Mr. Salter, mine-agent, West Bromwich; or to the Auctioneers, Temple-row, Birmingham.

VALUABLE TIN-PLATE WORKS, KIDWELLY, NEAR CARMARTHEN, SOUTH WALES.

MESSRS. KIRKMAN & THORNE have received instructions from the assignees to SELL, BY AUCTION, at the Mackworth Arms, Swansea, South Wales, on Saturday, the 15th of May, at One for Two o'clock precisely, an important LONG LEASEHOLD ESTATE, comprising the 2

KIDWELLY TIN-PLATE WORKS,

together with all necessary MACHINERY and BUILDINGS; an excellent DWELLING-HOUSE and GARDEN; a foreman's and a workman's cottage, and about half an acre of meadow land—situate about one mile from the borough town of Kidwelly; also, a WHARF and STOREHOUSE, with a frontage to the River Gwendraith, in the said town.

The whole of the above property is held on lease from the corporation of Kidwelly, for an unexpired term of 96 years, at the low ground-rent of £4 1s. The works contain all the requisite machinery for the manufacture of about 300 boxes of tin-plate per week.

Kidwelly is situated about 2 miles from the sea, 18 miles from Swansea, and 9 miles from Carmarthen.

The estate may be viewed by cards only, which, with particulars, may be obtained on the premises; at the Mackworth Arms, Swansea; the White Lion Hotel, Bristol; the Bell Inn, Gloucester; the Castle Inns, Brecon and Neath; the Ivy Bush Inn, Carmarthen; of Messrs. Tilson, Squance, Clarke, and Morice, solicitors, 29, Coleman-street; of Messrs. Crowder and Maynard, solicitors, Coleman-street; and of Messrs. Kirkman and Thorne, auctioneers, valuers, surveyors, and estate agents, 26, Nicholas-lane, Lombard-street, London.

CROMFORD CANAL SHARES.—TO BE SOLD, BY AUCTION, by Messrs. PEET & SON, on Tuesday, the 18th day of May inst., at George the Fourth Hotel, Nottingham, at Twelve o'clock precisely (by order of the executor of the late Mrs. Elizabeth Horton), FIFTEEN SHARES in the CROMFORD CANAL COMPANY, in lots of three shares each. 3

Under Acts of Parliament, obtained last session, the canal and works have been purchased by the Manchester, Buxton, Matlock, and Midland Junction Railway Company, under circumstances which will render the purchase of these shares a very desirable investment.—For particulars apply to Mr. J. W. Sleper, solicitor, 6, Vernon-place, Bloomsbury-square, London; or of Messrs. Peet and Son, auctioneers, Nottingham.

CORNWALL.—TO BE SOLD, BY AUCTION, by Mr. R. COAD, at WHEAL PROSPECT MINE, in the parish of CARDYNHAM, on Tuesday, the 18th inst., the following valuable MINING MATERIALS—viz.:

A 16-inch DIRECT-ACTING DOUBLE STEAM-ENGINE (equal to a 22-inch cylinder), with boiler, of 5 tons.
About 40 fathoms of 10, 9, and 7-inch PUMPS—complete.
A WATER-WHEEL, 32 feet diameter, 3½-feet breast. 4
Capstan and whim, capstan and whim ropes, smiths' and miners' tools, a large quantity of new and old timber and iron.—COUNTING-HOUSE FURNITURE, &c.
Dated May 3, 1847. *Sale to commence at Twelve o'clock.*

MINING MATERIALS FOR SALE.

MR. GEORGE SEALY is instructed to OFFER FOR SALE, BY AUCTION, on Tuesday, the 25th inst., at WHEAL VIRGIN, in the parish of ST. HILLARY, the following valuable

MINING MATERIALS—viz.: 5

1 60-inch cylinder STEAM-ENGINE, 10-feet stroke in the cylinder, and 9-feet in the shaft, with steam case and three boilers, weighing 30 tons.
1 19-inch cylinder STEAM WHIM-ENGINE, with boiler, cast-iron cage, &c., complete.
CRUSHING APPARATUS, consisting of cast-iron chairs, rolls, arbours, brasses, wood frame-work, &c., complete.
24 9-feet 14-inch PUMPS; 17 9-feet 13-inch ditto; 1 9-feet 12-inch ditto; 18 9-feet 11-inch ditto; 12 9-feet 10-inch ditto; 7 9-feet 9-inch ditto; 10 9-feet 8-inch ditto, and 6 9-feet 6-inch ditto.
2 11-feet 14-inch PLUNGER POLES; 1 9-feet 12-inch ditto; 1 11½-feet 10-inch ditto; 1 9-feet 6-inch ditto; and 1 11-feet 5½-inch ditto, with pole-cases, stuffing-boxes, and glands; H and top-doorpieces, clacksceats, and windboxes, to match each pole.
1 7-feet 9-inch windbore; 1 9-inch clack-doorpiece; 1 10-inch top-doorpiece.
60 fathoms 12-inch Memel rods, with faggotted strapping-plates and pins to match.
Several tons common iron strapping-plates, and pins to fit; 8 and 9-inch wood rods.
Large quantity of staples and glands, of various sizes; large capstan and shears.
2 Balance-bobs, and 2 angle ditto.
Several tons railroad iron and saddles, railroad waggons, large quantity of wrought and cast-iron, about 4 tons chain, smith's bellows and anvil, old brass, and a great variety of other articles.

The attention of parties engaged in the working of mines is earnestly requested to the foregoing announcement, as the whole of the materials will be found to be in excellent condition; and the proximity of Wheal Virgin to the ports of Hayle and Marazion will enable purchasers who may want to remove the articles from the neighbourhood to do so at a very moderate expense.

The Sale will commence precisely at Eleven o'clock.

Dated Wheal Virgin, near Goldsithney, May 4, 1847.

ON SALE—COLLIERIES, near BISHOP AUCKLAND, in the county of DURHAM.—TO BE SOLD, BY PRIVATE CONTRACT, the UNEXPIRED TERM, held by the present lessees, in the GORDON and EVENWOOD COLLIERIES. The above collieries are now in work, and are so situated as to command a considerable export, as well as land sale, trade. These advantages will be materially increased by the formation of the Auckland Branch of the York and Newcastle Railway, and the new railways leading to the south and west—for all of which Acts are obtained. By the first, great facilities will be obtained for shipments on the Tyne and Wear. 6

For further particulars apply to Mr. Brogden, Stockton-on-Tees.

ON SALE, BY PRIVATE CONTRACT, at the PROVIDENCE MINES, near ST. IVES, an excellent 30-inch cylinder STEAM PUMPING-ENGINE, with boiler, about 7 tons.—For duty performed, see *Lean's Reporter*, 1844 and 1845.

50 Fathoms 9-inch PUMPS, 30 fathoms 8-inch ditto, and other sizes.
1 11-inch doorpiece, 1 8-inch ditto.
1 8-inch working barrel, 1 6¾-inch ditto. 7
Rod-plates, feed-off bobs, rod-sheaves, whim-sheaves, shaft rollers, bucket-door, windbores, and a variety of other articles.

Apply to Capt. Penberthy, on the mines; or Samuel Higgs and Son, Penzance.
Dated March 10, 1847.

LARGE PUMPING-ENGINE.—TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, Helston, Cornwall, one 80-inch pumping-engine, 10 feet stroke in the cylinder, and 8 feet in the shaft, with three tubular boilers of about 35 tons, a balance-bob and top-piece of rod to each. This excellent engine was erected by one of the first engineers in the county; the air-pumps are lined with brass, and the whole of the machinery possesses great strength and durability. It has done a "duty" equal to the first in Cornwall, and is well worth the attention of any gentleman or company requiring such a powerful machine. The engine will be sold with or without the boilers, balance-bobs, &c., as may best suit the purchasers.

Application to be made to Capt. R. Williams, on the mines. 8
Dated Godolphin Mines, Helston, Cornwall, February 25, 1846.

TO PROPRIETORS OF WATER-WORKS, MINES, COLLIERIES, &c.—FOR SALE, a LARGE PLUNGER LIFT, consisting of—

10 9-feet 23-inch pump trees
1 23-feet matching-piece, 26 inches diameter, diminishing to 23 inches.
1 10½-feet plunger-pole, 23 inches diameter.
1 7-feet working-barrel, 22 inches diameter, with stuffing-box and gland. 9
1 H-piece, with door and clacks, complete.
1 6-feet windbore, 23 inches diameter.
Rings, flange-pins, and nuts to fit.

The whole length of the lift is about 17 fathoms; it is as good as new, and will be sold, delivered on the quay at Aberystwith, at 7s. 6d. per cwt. for the whole of the cast-iron parts, and 20s. per cwt. for the wrought-iron work.

Application to be made to George Fossett, Esq., Aberystwith; or John Taylor, jun., Esq., 2, Duke-street, Adelphi, London.—Dated May 5, 1847.

TO RAILWAY AND ELECTRIC TELEGRAPH COMPANIES.
BY HER MAJESTY'S ROYAL LETTERS PATENT.

REID'S PATENT PREPARED WIRE FOR ELECTRIC TELEGRAPHS, WIRE ROPE, AND FENCING. 10

The ADVANTAGES attending this WIRE are—

1. That it may be had of any length.—2. That it is of uniform size, and, when annealed, is of one uniform degree of softness.—3. That it is prepared for being galvanised by a process which leaves it wholly uninjured.

Hitherto it has been the practice, in cleaning wire to prepare it for the galvanising process, to immerse it in sulphuric, or nitric, acid, by means of which the wire has been much injured in its structure, from the acid not acting equally on all parts alike. By the new process this evil is entirely obviated, and the zinc coating is found to be more perfect.

For further particulars apply to the patentee, at 25, University-street, London, where specimens may be seen, and all orders will receive immediate attention.

CONTRACTS entered into and executed with promptitude.

ELECTRIC TELEGRAPHS.—As the INVENTORS and PATENTEES of the ELECTRO-TELEGRAPHIC CONVERSER, the principle of which is far more simple, certain, and perfect than any at present known to the world, we feel justified in asking all BRITISH and FOREIGN RAILWAY COMPANIES, as well as the various FOREIGN GOVERNMENTS requiring these important instruments, to PAUSE before they ADOPT any PARTICULAR TELEGRAPH, until our patent arrangements are complete; when an inspection of OUR TELEGRAPH will convince them of its superiority, being perfectly free from vibration, and not liable to derangement by atmospheric or other influences; and may be worked by a single wire, through any number of instruments, on any length of line. BRETT & LITTLE, 11
140, Holborn-bars, London.

ELECTRO-MAGNETIC TELEGRAPH—NOTT'S PATENT.

PATRONISED by H. R. H. PRINCE ALBERT, the LORDS OF THE ADMIRALTY, &c.

The proprietors of Nott's Patent beg to inform all RAILWAY COMPANIES, that they are ready to TREAT with them for the ERECTION of the TELEGRAPH, on any length of railway, on the most reasonable terms. This instrument, from its simplicity of construction and certainty of action, is, after the most severe test, proved to be the most useful and efficient instrument of the kind ever yet invented, as reported on by Dr. Faraday, Capt. Brandreth, Professor Brande, Dr. Bachhoffner, &c., and, in fact, all the science of the country.

It may be seen in daily operation on the London and North-Western Railway, where it is in practical use, between Blisworth and Northampton stations; also, at the Telegraph Office, 2, Royal Exchange-buildings, where all particulars may be obtained, and the report seen. 12

LONDON AND NORTH-WESTERN RAILWAY.
STEAM-ENGINES FOR SALE, BY AUCTION.

On TUESDAY, the 15th of JUNE, at CAMDEN STATION, on the London and North-Western Railway, if not previously disposed of, TWO LOW-PRESSURE STATIONARY ENGINES, 60-horse power each—made by Maudslays. These engines are in good working order, and have duplicate pistons; also five fly and rope-wheels, and a travelling frame; two circular boilers, 20 ft. 6 in. long, 7 ft. 8 in. diameter, with two tubes in each, 2 ft. 8 in. diameter; two marine boilers, 18 ft. long, 7 ft. 6 in. wide, and 8 ft. 9 in. high; 100 feet of 9½-inch steam-pipe, safety-valves, dampers, frames, &c., complete.
Office, Euston Station, April 17, 1847. 13

BIRMINGHAM, WOLVERHAMPTON, AND DUDLEY RAILWAY.

SECOND CALL OF FIVE POUNDS PER SHARE—MAKING TEN POUNDS PAID.

The directors having passed a resolution, making a CALL upon the shareholders of FIVE POUNDS on each share held by them respectively—such call to be PAID on the 1st day of June, 1847; the shareholders are hereby required to pay such call on or before the day appointed, to one of the undermentioned bankers; and, in default thereof, they will be charged with interest, at the rate of 5 per cent. per annum, from that day until the said call be actually paid:—

The Birmingham Banking Company, } Birmingham.
Messrs. Attwoods, Spooner, and Co. } 14

OR AT THEIR LONDON AGENTS:

Messrs. Jones Loyd and Co., for the Birmingham Banking Company.
Messrs. Spooner, Attwood, and Co., for Messrs. Attwoods and Co.; and at
Messrs. Moss and Co., Liverpool, for the Birmingham Banking Company.

A circular will be sent to each shareholder, which must be deposited at the bankers when the call is paid. By order of the board of directors,
JOHN WILLIAM KIRSHAW, Secretary.
34, Bennett's-hill, Birmingham, April 26, 1847.

CALEDONIAN RAILWAY.—The SITUATION of SECRETARY and GENERAL MANAGER to the CALEDONIAN RAILWAY being VACANT, CANDIDATES are requested to APPLY, by letter, addressed to the Chairman, and endorsed "Application for Secretaryship," at the office of the company, 26, Great George-street, Westminster, previously to the 20th inst. 15
London, May 5, 1847.

CALEDONIAN RAILWAY—LOANS ON DEBENTURES.—The CALEDONIAN RAILWAY COMPANY are prepared to RECEIVE TENDERS of LOANS on DEBENTURES, in sums of not less than £500, for three or five years, bearing interest at the rate of 5 per cent. per annum, payable half-yearly, in Edinburgh, Glasgow, London, Liverpool, Manchester, or Bristol.

Tenders to be addressed to this office.—Parties may also communicate personally with Messrs. Foster and Braithwaite, 68, Old Broad-street, London. 16
By order of the directors, D. RANKINE, Treasurer.
Caledonian Railway Office, 122, Princes-street, Edinburgh, March 26, 1847.

EAST LINCOLNSHIRE RAILWAY.—TO CONTRACTORS.—The directors are prepared TO LET the ERECTION and COMPLETION of the various STATIONS upon this railway.—The plans and specifications may be seen, and further particulars obtained, at Mr. Fowler's offices, 13, Abingdon-street, Westminster, on and after Monday, May 10th, and the directors will meet at their offices, 14, Moorgate-street, at Eleven o'clock, on Thursday, May 27, to receive the tenders and let the works.—The directors do not bind themselves to accept the lowest tender. G. H. PACKE, Chairman. 17

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES, RAILWAY CRANES, FIRE-ENGINES, GAS, &c.
PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION. 18

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.

VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK,
Goswell Mews, Goswell-road, London.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public. 19

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

PROJECTED RAILWAYS.—GREAT REDUCTION IN PRICE—PATENT METALLIC SAND, OR ENGLISH POZZOLANO,

Extensively used in mortar and concrete at the great tunnels on the London and Birmingham Railway, in the foundations of the new Houses of Parliament, sea walls on the North Devon Railway, Clifton Reservoirs, and other works of importance. 20

From its chemical qualities, the metallic sand forms, in admixture with lime and common sand, a cement, mortar, or concrete, of flinty hardness, and almost entire incompressibility; and, from its adhesive and impervious qualities, it completely and for ever excludes water. The more it is exposed to the atmosphere, and to wet and damp, the harder and more durable it becomes.

As an external stucco, the metallic sand cement is unaffected by frost or wet; in appearance it resembles the best Portland stone—requires, therefore, neither colour nor paint, and is entirely free from vegetative cracks and blisters, to which Roman cement is liable.—Further information will be given, and specimens shown, on application to Mr. C. K. DYER, 4, New Broad-street, London.

ANALYSIS OF THE PATENT METALLIC SAND.

Silica	49	Lime	6
Oxide of iron	33	Magnesia	2
Alumina	6	Zinc	3
		Arsenic and carbonate of copper	2

TO ENGINEERS, BOILER-MAKERS, AND OTHERS.—LAP-WELDED IRON TUBES, FOR STEAM-BOILERS.

W. H. RICHARDSON, Jun., & CO., DARLASTON, 21
STAFFORDSHIRE.

MANUFACTURE all DESCRIPTIONS of WELDED WROUGHT-IRON TUBES, for STEAM, GAS, &c., of any required length and diameter, on the new and unequalled principle of Mr. J. Roose's recent invention (patented August, 1846).—Address as above.

SULPHUR.—TO BE SOLD, RODGERS'S PATENT FOR THE SEPARATION OF SULPHUR FROM MINERAL SUBSTANCES.
Apply to Mr. Phillips, 2, Duke-street, Adelphi, London. 22

TO IRONFOUNDERS, ENGINE MANUFACTURERS, &c.—BEST BAR, SHEET, BOILER-PLATE, ROD, and HOOP IRON, direct from the WORKS, in STAFFORDSHIRE: also, SCOTCH, WELSH, and STAFFORDSHIRE PIG IRON.—Apply to T. M. GLADSTONE & CO., 7, Birchin-lane, City. 23

TO IRON AND COAL MASTERS.—S. B. ROGERS, of NANTYGLO, MONMOUTHSHIRE, respectfully begs to announce to IRON and COAL MASTERS, that he has DISCOVERED some very great IMPROVEMENTS in the CONSTRUCTION of COKE OVENS, whereby a SAVING of full TWENTY PER CENT. may be effected in the conversion of small coal into coke.—The cost of ovens, and other particulars, communicated in reply to pre-paid letters, addressed as above. 24

METAL AGENCY, LIVERPOOL.—WANTED, by a FIRM in LIVERPOOL, an AGENCY for the SALE of COPPER, IRON, TIN, TIN-PLATES, or any of them, and METALS generally. One partner, who is acquainted with the trade and manufacture, would devote a large portion of his time and attention to the business. Occasional advances could be made if required.—Letters to be addressed to Box G 69, Post-office, Liverpool. 25

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 26

MESSRS. J. PAINTER AND CO, SHAREBROKERS, MINING AND GENERAL AGENTS,
25, *CASTLE-STREET, LIVERPOOL,*
AFFORD EVERY INFORMATION as to the STATE of the MARKETS, PRICES, upon application. 27

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.
THREE KING'S COURT, LOMBARD-STREET, LONDON. 28

THOMAS P. THOMAS, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES.
18, *THREADNEEDLE-STREET, LONDON.* 29

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.—N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain. 30

WILLIAM H. SMITH, MINING SHARE AGENT,
10, *WARNFORD-COURT, THROGMORTON-STREET,*
has SHARES FOR SALE in the following MINES—viz.:

WHEAL LOUISA,	ALBERT CONSOLS,
WHEAL BLENCOWE,	WEST SHEPHERD,
WHEAL MARY PENTUAN,	VICTORIA TIN MINING COMPANY.

*** Every information will be afforded on application. 31

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER,
MATTHEW-STREET, TAVISTOCK. 32
Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract.

JOHN TREGONING, MINE SHARES COMMISSION AGENT, *HIGH-CROSS, TRURO.* 33

JAMES LANE, MINING SHARE DEALER,
75, OLD BROAD-STREET, LONDON. 34

MESSRS. WINSTANLY AND CO., SHAREBROKERS, inform their friends and the public, they BUY and SELL every description of RAILWAY SHARES on the most advantageous terms; they also make advances upon the deposit of scrip and shares for periods as may be agreed.
6, Bank Chambers, City. 35

MINING ADVENTURERS' SUBSCRIPTION ROOM: ORIGINAL REGISTRY OFFICE FOR THE SALE AND PURCHASE OF MINING SHARES.
CROSSMAN, SOMMERS, AND CO., AGENTS,
28, *THREADNEEDLE-STREET LONDON.*
SHARES FOR DISPOSAL. 36

Birch Tor and Vitifer Tin Mine	Great Wheal Frederick Linkinghorne
Wheal Yeoland Copper Mine	Wheal Collier
Grose's Delabole and Wharncliffe	Devon and Courtenay Consols
Slate Quarry	North Eastern Mining Co. of Ireland
West Wheal Providence Mine	Exmoor Wheal Eliza
Grambler and St. Aubyn Copper Mine	South Wheal Maria
Wheal Tremayne Copper Mine	Wheal Susan

A FEW FORFEITED SHARES IN SOUTH FRIENDSHIP WHEAL ANN, &c. &c.

GEORGIA TIN MINES, divided into 2048 shares, and worked *ON THE COST-BOOK SYSTEM.* 37

The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans, with the correspondence, may be seen.

NORTH-EASTERN MINING COMPANY OF IRELAND.
CONDUCTED ON THE COST-BOOK SYSTEM.
Divided into 512 shares, with an immediate call of £10 per share. 38

The prospectus of the company, with reports on the past operations and present returns, may be obtained on application at the office of Mr. Henry English, mining engineer, 25, Fleet-street, London, to whom all communications, with reference to the increased issue of shares, are to be addressed, and where specimens of the ore, and other information, may be acquired.

GENERAL MINING COMPANY FOR IRELAND.—Notice is hereby given to such SHAREHOLDERS in this company who have NOT PAID the SECOND CALL, £1 per share, made on the 4th of January last, that the non-payment of such call renders them liable to interest, at 5 per cent., and also to the forfeiture of their shares; and such defaulting shareholders are hereby required to PAY said call into the National Bank of Ireland, College-green, Dublin, on or before the 15th of May inst., after which date the directors will proceed to act in accordance with the powers vested in them. (Signed) THOMAS MAGUIRE, Sec.
Company's Office, 2, Burgh-quay, May 1, 1847. 39

IMPERIAL BRAZILIAN MINING ASSOCIATION, Winchester-house, Broad-street, London, May 3, 1847.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the proprietors of shares in this association will be HELD at the London Tavern, Bishopsgate-street, on Thursday, the 20th inst.—Notice is hereby also given, that, at this meeting, the election will take place of three directors, in the room of Joshua Walker, Esq., John Brightman, Esq., and George Thomas, Esq.; and of one auditor, in the room of Henry James Brooke, Esq., who go out of office by rotation, but who, being re-eligible, offer themselves for re-election.

The chair will be taken at Two o'clock precisely. 40
GEORGE THOMAS, Acting Director.
N.B. The auditor's statement may be seen at the office three days before the above meeting.

DEAN PRIOR AND BUCKFASTLEIGH MINES.—A SPECIAL GENERAL MEETING of adventurers will be HELD on Thursday, the 13th of May inst., at Two o'clock precisely, at the offices of Mr. Henry English, 25, Fleet-street, London, to receive a report on the mines, with the accounts, and on other business.—May 1, 1847. HENRY ENGLISH. 41

ILAM MINE.—A SPECIAL GENERAL MEETING of adventurers will be HELD on Thursday, the 13th of May inst., at Three o'clock precisely, at the offices of Mr. Henry English, 25, Fleet-street, London, to receive a report on the mines, and on other business.—May 1, 1847. HENRY ENGLISH. 42

WHEAL EMMA.—A SPECIAL GENERAL MEETING of adventurers will be HELD at the offices of Mr. Henry English, No. 25, Fleet-street, London, on Thursday, the 13th inst., at Four o'clock precisely, to receive a report on the mines, and audit the accounts, and further to determine on other matters to be submitted.—May 1, 1847. HENRY ENGLISH.

WEST WHEAL JEWEL MINING ASSOCIATION.—Notice is hereby given, that the ANNUAL GENERAL MEETING will be HELD at the company's offices, as under, on Monday, the 10th May inst., at Twelve for One o'clock precisely. By order, WM. NICHOLSON, Secretary. 44
57, Old Broad-street, April 12, 1847.

WHEAL CURTIS COPPER MINING COMPANY.—Notice is hereby given, that the GENERAL MEETING of the shareholders of this company, convened for Tuesday next, the 4th of May inst., is POSTPONED until Tuesday, the 18th day of May inst., at Two o'clock precisely, when the attendance of each shareholder is particularly requested. By order, GEO. A. JACOB, Secretary. 45
Gresham Rooms, Basinghall-street, London, May 1, 1847.

IMPROVED LIFTING JACKS,

MANUFACTURED BY

GALLOWAYS' AND CO.,

KNOTT MILL,

MANCHESTER.

IMPROVED RATCHET JACK.

HALEY'S PATENT LIFTING JACK.

*** The attention of parties who employ

Lifting Jacks,

is respectfully requested to the superiority of those annexed, over those hitherto in use.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY,

28, *CORNHILL, LONDON.*

Capital £500,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates.

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 30 to 65 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age.	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
30	£1000	£20 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 3 1	348 2 3
			1840	116 7 6	54 0 10	7 18 10	296 18 4
			1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year.

F. FERGUSON CAMBROUX, Secretary.

Copy of a Letter from "COLONEL HAWKER" (the well-known author on "GUNS AND SHOOTING").

Longparish House, near Whitchurch, Hants, Oct. 21, 1845.

SIR,—I cannot resist informing you of the extraordinary effect that I have experienced by taking only a few of your LOZENGES. I had a cough, for several weeks, that defied all that had been prescribed for me; and yet I got completely rid of it by taking about half a small box of your Lozenges, which I find are the only ones that relieve the cough without deranging the stomach or digestive organs.—I am, Sir, your humble servant,

To Mr. Keating, &c., 79, St. Paul's Churchyard. P. HAWKER.

KEATING'S COUGH LOZENGES are PATRONISED also by his Majesty the King of Prussia, his Majesty the King of Hanover, and most of the Nobility and Clergy of the United Kingdom, and are especially recommended by the Faculty.

RECENT TESTIMONIAL.

DEAR SIR,—Having been, for a considerable time during the winter, afflicted with a violent cough, particularly at lying down in bed, which continued for several hours incessantly, and after trying many medicines without the slightest effect, I was induced to try your Lozenges; and, by taking about half a box of them, in less than 24 hours, the cough entirely left me, and I have been perfectly free from it ever since.

9, Claremont-terrace, Pentonville, I am, dear Sir, yours, very respectfully,

Feb. 17, 1845. JAMES ELLIS,

Mr. KEATING. (Late proprietor of the Chapter Coffee-house, St Paul's.)

Prepared and sold in boxes, 1s. 1½d., and tins, 2s. 9d., 4s. 6d., and 10s. 6d. each, by T. Keating, chemist, &c., No. 79, St. Paul's Churchyard, London; and retail by all druggists and patent medicine venders in the kingdom.

N.B.—To prevent spurious imitations please to observe that the words "KEATING'S COUGH LOZENGES" are engraven on the Government stamp of each box.

NOTICE.—These Lozenges contain no opium, or any preparation of that drug.

ON NERVOUS DEBILITY & GENERATIVE DISEASES.—Just published, the Thirtieth Thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, "MANHOOD: the Causes of its Premature Decline, with Plain Directions for its Perfect Restoration." A medical essay on those diseases of the generative organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in Youth, Manhood, and Old Age; with practical remarks on marriage—the treatment and cure of nervous and mental debility, impotency, syphilis, and other urino-genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c.

By J. L. CURTIS and CO., Consulting Surgeons, 7, Frith-street, Soho-square, London.

REVIEWS OF THE WORK:—"'Manhood:' a medical work. To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions, whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health."—*Chronicle.* "We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, a preceptor, or a clergyman."—*Sun, Evening Paper.* "Curtis on Manhood should be in the hands of youth and old age. It is a medical publication, ably written, and develops the treatment of a class of painful maladies which has too long been the prey of the illiterate and the designing."—*United Service Gazette.*

Published by the authors, and may be had at their residence; sold also by Strange, 21, Paternoster-row; Hannay, 63, Oxford-street; Mann, 39, Cornhill, London; A. Heywood, Oldham-street, Manchester; Phillip, South Castle-street, Liverpool: Campbell, 146, Argyle-street, Glasgow; Robinson, 71, Greenside-street, Edinburgh; and, in a sealed envelope, by all booksellers.—Messrs. Curtis and Co. are to be consulted daily at their residence, *No.* 7, Frith-street, Soho-square, London; and patients can have this work privately forwarded them, by initial or otherwise, to any part of the United Kingdom, direct from the authors' residence; or from any of the above agents, on remitting 2s. 6d. in postage stamps.

ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY,

With 25 coloured engravings.

Just published (in a sealed envelope), price 2s. 6d.; or post-paid to any address, 2s. 6d., in Post-office order or stamps,

SELF-PRESERVATION: A Medical Treatise, on Marriage, and on those Secret Infirmities and Disorders of Youth and Maturity that are usually acquired at an early period of life, which tend to destroy physical and mental energy, ardour, passion, and all the attributes of manhood. Illustrated with twenty-five coloured engravings, on the anatomy, physiology, and diseases of the urinary and reproductive organs, explaining their various structures, uses, and functions, and showing the injuries that are produced in them, by solitary habits, excesses and infection. With practical observations on the treatment of nervous debility, local and constitutional weakness, syphilis, stricture, and other diseases of the urethra. By SAMUEL LA'MERT, consulting surgeon, 9, Bedford-square, Bedford-square, London, Matriculated Member of the University of Edinburgh, Honorary Member of the London Hospital Medical Society, Licentiate of Apothecaries' Hall, London, &c.

REVIEWS OF THE WORK.

"The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Era.*

"Unquestionably this is a most extraordinary and skilful work, and ought to be extensively circulated; for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the conductors of those establishments, and which cannot be too strongly reprobated and condemned. The engravings that accompany the work are clear and explanatory; and being written by a duly-qualified medical practitioner, will, doubtless, be the means of saving many a youth, as well as those of maturer age, from the various evil consequences resulting from early indiscretions."—*Magnet.*

Published by the author; and may be had from Kent and Richards, 51 and 52, Paternoster-row; Hannay and Co., 63, Oxford-street; Starie, 28, Tichborne-street, Quadrant; Gordon, 148, Leadenhall-street, London; Newton, 16, Church-street, Liverpool; and by all booksellers.——At home for consultation daily, from nine till two, and from five till eight; and all letters, immediately replied to, if containing the fee of £1, for advice, &c. The work may be had direct from the author's residence, and will be forwarded, free by post, to any address for 3s. 6d. in postage stamps.—9, Bedford street, Bedford-square.

The Nineteenth Edition, price 2s. 6d.; free by post, 2s. 6d.

THE SILENT FRIEND: a medical work, on the concealed cause of constitutional or acquired debility, loss of muscular energy, and derangement of the generative system, nervous debility, constitutional weakness, excessive indulgence, &c.; with Observations on Marriage, &c. By R. and L. PERRY and Co., surgeons, London. Published by the authors, and sold at their residence; also by Strange, 21, Paternoster-row; Hannay & Co., 63, Oxford-street; Noble, 109, Chancery-lane; Gordon 148, Leadenhall-street; Purkis, Compton-street, Soho, London.

Part I. of this work is addressed to those who are prevented from forming a matrimonial alliance, and will be found an available introduction to the means of perfect and secret restoration to manhood.—Part II. treats upon those forms of diseases, either in their primary or secondary state, arising from infection—showing how numbers neglect to obtain competent medical aid, entail upon themselves years of misery and suffering.

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Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

Society.	*Address.*	*Day.*	*Hour.*
Asiatic	14, Grafton-street	Saturday	3 P.M.
Royal Botanic	Inner Circle, Regent's-park	Saturday	3½ P.M.
Western Scientific Institut.	Leicester-square	Monday	8½ P.M.
Geographical	8, Waterloo-place	Monday	8½ P.M.
Medical	Bolt-court, Fleet-street	Monday	8 P.M.
Medical and Chirurgical	53, Berners-street	Tuesday	8½ P.M.
Civil Engineers	25, Great George-street	Tuesday	8 P.M.
Zoological	11, Hanover-square	Tuesday	3 P.M.
Syro-Egyptian	71, Mortimer-st., Cav'ndish-sq.	Tuesday	7½ P.M.
Society of Arts	Adelphi	Wednesday	8 P.M.
Geological	Somerset-house	Wednesday	8½ P.M.
Graphic	Thatched-house Tavern	Wednesday	8 P.M.
Antiquaries	Somerset-house	Thursday	8 P.M.
Royal Society Literature	4, St. Martin's-place	Thursday	4 P.M.
Medico-Botanical	32, Sackville-street	Thursday	8 P.M.
Astronomical	Somerset-house	Friday	3 P.M.
Royal Institution	Albemarle-street	Friday	3 P.M.
Philological	Lond. Lib., 12, St. James's-sq.	Friday	8 P.M.

DRY GAS-METERS.

After the usual routine business had been disposed of at the Society of Arts, on Wednesday last, the first paper read was one communicated by Mr. Defries, 3t. Martin's-lane, "On the Defects of, and Recent Improvements in, Gas-Meters; with some Remarks on the injurious effects of Gas on the Metal employed in Machinery." The subjects were illustrated by one of Mr. Defries's gas-meters, then in operation, and by several models.

The paper commenced by stating, that many attempts had been made to produce perfect dry-meters, and to improve water-meters; but that the one then exhibited was the most accurately constructed now in use—inasmuch as gas, in its most impure state, even though just generated from the retort, would neither disturb its arrangement nor lessen its value. It was notorious, that the gas supplied by some London and provincial gas companies contained ammonia and sulphuretted hydrogen, which tended to impair the meter; although he admitted, in justice to some of the London companies, that several of them had had meters of his invention in constant use for seven years, which had been found, on inspection, to be in as good condition as they were on the day they were fixed—the tin and gearage being quite bright. On the other hand, he had seen meters, which, after being only six months in action, had been so impregnated with sulphur and ammonia, that they ceased to perform their most important function: namely, that of registration. [Mr. Defries here exhibited several specimens of metal encrusted by the action of ammonia, and explained in what manner the consequent defective operation of the valves allowed the gas to pass through the apparatus without registration.] This corrosion, so fatal to the efficiency of the gas-meter, was the subject of much study and anxiety; and at length, after repeated experiments, he succeeded in constructing a valve, which would protect the machinery from the injurious action which gas had over most metallic substances.—In answer to a question from Mr. Russell (the intelligent secretary of the institution), Mr. DEFRIES here explained that although metallic compositions, or amalgamations, were made, which were not acted on by the gas or by ammonia, they were too soft for the purposes of perfect machinery. In some portions of the meter it was, therefore, absolutely necessary to use a hard and ordinary metal.

The paper was then resumed, in which Mr. DEFRIES stated that his new arrangement allowed the gas to pass without touching the upper chamber, in which the works were, and, consequently, there could be no corrosion of machinery to affect the registration, besides the advantage of working with less pressure than any other meter. [Mr. Defries here reduced the metre then in the room, which was working at a pressure of six tenths, to half a tenth.] The means by which he had produced this all-important result was by the invention of a rotary valve, by which the gas was prevented from escaping into the upper chamber; and by the construction of the gearing below, which regulated the parallel motion of the partition, in an amalgamation of metals which would not corrode. When he fearlessly asserted that the valve and the gearage thus constructed would effectually resist the influence of the most impure gas, every engineer and every gas company must at once admit, that the invention was one of the deepest importance to them and to the public. The invention had also proved of incalculable value in the inflation of balloons. He had constructed a protective valve, capable of inflating Mr. Green's monster Nassau balloon, which had been thought impracticable; but the meter passed, with the greatest ease, 6000 cubic feet per hour. This meter was subsequently used in the inflation of Mr. Gale's newly-constructed balloon, which ascended from Peckham on the 7th of April, 1846. Its powers were then tested, to settle a difference between Mr. Gale and the South Metropolitan Gas Company, on which occasion it passed the gas at the rate of 100 cubic feet per minute, to the great surprise of the scientific gentlemen who were present. As proofs of the superiority of this dry meter, over all others, the paper mentioned several parties who had tried them with perfect success, and without a single failure. Mr. Reis, of the cigar divan in the Strand, had had two for fifty lights, each in constant use for nearly six years, without requiring the slightest repair. The well-known establishment of schoolbred, Cook, and Co., drapers, Tottenham-court-road, had three of 100 lights each—the first of which had been fixed four years ago, the second two, and the last a few weeks. There had been one in use for 60 lights at the Institution of Civil Engineers, George-street, Westminster, for some time, and the manager highly approved of it. The Royal Italian Opera House had three for 100 lights each; and they were also in use in her Majesty's dock-yards, and at almost all the club houses. Upwards of two years ago he had furnished the House of Lords with one for 350 lights; and last month he had the satisfaction of supplying two more for 100 lights each. Lastly, though not least, there were two at the Thames Tunnel—one for 100 lights, and the other for 100—the registration of which was daily recorded, and found to be most infinitely correct; these last-mentioned ones had been at work night and day for nearly four years, which was equal to 30 years of ordinary use, and now showed that 900,400,223 feet had passed through them. He had much pleasure in adding, that he had just received an order from the Chartered Gas Company, Brick-lane, for one 300 light meter, to be fixed at the new prison of detention. The capability, durability, and convenience of his dry meter were thus satisfactorily proved: and he was gratified that his long and arduous labours had been crowned with a success which would also conduce to the public benefit.

M. DEFRIES then proceeded, with the assistance of his models, to explain, in detail, the construction of his meter. Its form is circular, divided into three rhomboidal compartments, and one superior chamber. Each of the three rhomboidal compartments is subdivided into angular compartments, by a perpendicular partition, formed of four metallic angular plates, united at their edges, and also at the centre, by a skin of leather, properly prepared; the meter, consequently, contains six chambers in the lower portion of the apparatus, not communicating with each other, but all communicating through a rotatory valve with the upper portion. Each of these partitions—the chamber being filled with gas—works backwards and forwards, alternately bulging out, or receding at its centre, with a perpendicular shaft. The three perpendicular shafts pass through as many stuffing boxes into the superior chamber; when each shaft, communicating by two rods with the axle of the common tangent of one, and transmitting to it the alternate motion of its own partition, induces, by combination, a rotary motion in an upright spindle. The inferior compartments are the parts employed in the measurement of the gas—while the superior chamber received the gas so measured. In the superior chamber is placed a rotary valve—the seat of which is divided into six compartments, to supply alternately the three partitions. The valve is arranged over the three pairs of measuring compartments in such a manner, that the centre, or ingress part of the valve, is alternately connected with the part on either side of each partition; and the pressure of gas entering one side of the partition, discharges the contents of its fellow compartment into the common chamber above, from which the measured gas passes to the burners. Above the spindle of the tangent, a perpendicular shaft is connected with a horizontal wheel, which gives the motion to the index train. An arrangement of wheels, similar to those used in clock-work, registering, in the drum, 5 ft. of gas, measures, on the first dial, 1000 cubic feet; on the second, 10,000; and on the third, 100,000.

In order to show the nicety of completion, M. DEFRIES stated, that the meter exhibited to the meeting, indicated the sixtieth part of one-tenth of a foot. The machine once fixed, required no attention; and it was his opinion, that it would work with perfect accuracy for 15 or 20 years, or for a longer period, as was proved by the meters at the Thames Tunnel, and her Majesty's dockyard at Woolwich, which had been constantly at work, day and night, for about four years, which was equal to about 30 years of ordinary use. Indeed, so convinced he had been of the efficiency of his invention from the first, that he refused an order from a London gas company for six dozen of the original construction, just before he had completed the protective valve. There were now upwards of 15,000 of his meters in use at the present time; and he had altered, at his own expense, more than 1000 meters from the flexible to the solid partitions, as the latter could alone be depended on for correct legislation. He concluded by expressing his thanks to the society for affording him an opportunity of bringing his meter, with its new protective valve, prominently before the public. (Applause.)

Mr. NEWTON said, the question whether dry gas-meters were the best was still unsettled; he would not, however, detain the meeting with remarks on that point, but adhere to the paper laid before them. If he understood it right, it set forth that all impurities in the gas acted on and corroded the machinery; and it being desirable, of course, to prevent this, a partition was introduced into the meter, and, by means of a sliding valve, the gas was kept from the machinery; and for this contrivance, Mr. Defries claimed the exclusive rights of an inventor. Now, gas had been long known to be injurious to the machinery of the meter, and there had already been one constructed, by which it was excluded, as in this case, by means of a rotary valve, invented and brought into operation by Mr. Edge, and his associate, Mr. Wright.—Mr. Wright here handed his valve to Mr. Newton, who, on comparing it with Mr. Defries's model, said it was the same in principle, though not exactly identical in form.

The SECRETARY remarked, that that led to the question, whether or no form was principle. (Hear.)

Mr. NEWTON said, that having pointed out this apparent resemblance, it was for Mr. Defries to show in what respect his meter was an improvement on that of Messrs. Wright and Edge.

Mr. DEFRIES expressed the astonishment he felt at hearing such remarks, when it was quite obvious that the valve produced by Mr. Wright allowed the gas to escape to the upper part, while his kept that portion of the works entirely from the gas. (Hear.) If the resemblance were such as Mr. Newton spoke of, the proper place to decide the dispute would be a court of justice, and not a meeting like that.

The SECRETARY here interposed, and explained what was the rule of the society. First of all, they regarded the individual completeness of an invention, and then compared it with rival contrivances. The question of priority of invention was a matter of history: it involved two points—first, the time; and secondly, the perfect identity of the two things. This was, however, a matter for the committee of mechanics, or for the Court of Chancery. (Hear.) They always, however, tried to avoid what was likely to go into Chancery; though there was no doubt that priority of invention was a thing which might, and ought to be, considered by the society. (Hear.) If, instead of talking of courts of law, they would discuss the identity of the inventions, it would be perfectly in order; but if they choose to talk of Chancery, and of one man taking another's inventions, that was clearly out of order. (Hear).—The Secretary having thus, with great tact, restored the good humour of the parties, which at one time seemed slightly in danger of infringement, Mr. Wright was heard, but his remarks were merely an amplification of Mr. Newton's objections.—Mr. Defries having replied,

The SECRETARY hoped the society understood that these questions of comparative merits rested entirely with the mechanical committee, before whom the point in dispute that evening would be thoroughly gone into. He could, therefore, assure Mr. Wright, that the society's gold medal would not be awarded to Mr. Defries, until that committee were satisfied his was an exceedingly good invention, perfectly original, and no piracy. (Applause.) All they professed to do, was to offer a fair ordeal to the inventor, and to enable the public to come in contact with the inventions. Messrs. Newton and Wright then, except, perhaps, in a few warm words, were perfectly in order in saying they had another invention; but they must not now show it against the one now exhibited, but, if they chose, on some other evening. There was a resemblance between the two, but the question of identity could not then be entertained.

Mr. NEWTON did not intend to depreciate the value of the invention; and he, therefore, proposed that the thanks of the society be given to Mr. Defries, for the paper in which he had brought this beautiful invention before it. (Applause.)—The motion was seconded, and carried by acclamation; and at the conclusion of the meeting, the ladies and gentlemen present grouped themselves around the model at work, in order to listen to the further explanations and remarks of Mr. Defries, in relation to his clever, useful, and beautiful production.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....West Wheal Jewel Mining Company—offices, at Twelve for One.

TUESDAY.....Kirkcudbrightshire Mining Company—offices.
Wheal Concord Mining Company—offices, at Two.
Coombe-Lawn Mining Company—offices, at Twelve.
Louvain à la Sambre Railway—London Tavern, at One.

WEDNESDAY..Legal and Commercial Life Assurance Society—offices, at Twelve.
Imperial Continental Gas Association—offices, at Two.
Universal Life Assurance Society—offices, at One.

THURSDAY....Dean Prior and Buckfastleigh Mines—offices, at Two.
Ilam Mining Company—offices, at Three.
Wheal Emma Mining Company—offices, at Four.
National Provincial Bank of England—offices, at Twelve.

FRIDAY.....New Zealand Company—offices, at One.
Waterford and Kilkenny Railway—London Tavern, at Twelve for One.
Reading, Guildford, and Reigate Railway—offices, at One.

SATURDAY.....General Fire and Life Assurance Company—offices, at Twelve.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

BIRMINGHAM, WOLVERHAMPTON, AND DUDLEY RAILWAY.

A special meeting of proprietors was held at Doe's Royal Hotel, Birmingham, on Saturday last, for the purpose of taking into consideration the draughts of two bills now before Parliament—viz., 1. "A bill for making a railway from Stourbridge to the Birmingham, Wolverhampton, and Dudley Railway at West Bromwich, and for other purposes;" and, 2. "A bill for uniting the Birmingham and Oxford Junction Railway, and the Birmingham, Wolverhampton, and Dudley Railway Company, into one company; and for authorising the sale of the Birmingham, Wolverhampton, and Dudley Railway, and other new works, to the Great Western Railway Company."

In consequence of the litigation now going forward between the proprietors and directors of the Birmingham and Oxford Junction Railway Company, it was expected that the meeting (the proprietors of the Birmingham, Wolverhampton, and Dudley Railway being materially interested in the issue of the contest) would have been very numerously attended; but at no period during the proceedings were there present (including the secretary and solicitor to the company) more than 25 persons. Lord Hatherton, one of the most active of this, as well as of the Birmingham and Oxford line, did not arrive until after the proceedings had terminated. Mr. Barlow, one of the directors of the Great Western, occupied a seat at the table.

The CHAIRMAN (Mr. W. Mathews) called upon the solicitor to the company to read the draughts of the two bills to be submitted for the consideration and approbation of the meeting.

Mr. WHATELEY, previous to obeying the direction of the chairman, said, if any director or proprietor wished the bills to be read at length, he would do so, else he would shortly read the object of their clauses and provisions, as was usually the practice on such occasions. He then read the marginal notes of both bills, with the exception of the clause in the second bill, authorising the sale to the Great Western, which he read at length.

The CHAIRMAN moved, and Mr. J. ASTON seconded, resolutions approving of both bills, which being unanimously carried, the company's seal was ordered to be affixed to them.

The CHAIRMAN then said this was the whole of the business to be brought before the meeting. He could only say, that the works on the Birmingham, Wolverhampton, and Dudley line, were proceeding in a satisfactory manner, and that they would be completed as speedily as possible. With respect to the litigation now going forward between the directors and a portion of the proprietors of the Birmingham and Oxford Junction, and in which they (the Birmingham, Wolverhampton, and Dudley Railway) were indirectly concerned, he might be allowed to observe, that the proceedings to them were highly satisfactory: they could not hope for, nor desire, a more satisfactory position than that in which they were then placed.

A vote of thanks having been passed to Mr. Mathews, for his conduct in the chair, the meeting separated.

BRISTOL AND EXETER RAILWAY.

A special general meeting of shareholders was held at the White Lion Hotel, Bristol, on Monday, the 4th inst., for the purpose of agreeing or dissenting from a bill now before Parliament, to enable the South Devon Company to construct railways to Tavistock and Launceston, and to extend the South Devon line to Torquay and Brixham, and also to consider the bill to authorise an alteration in the line of the Cornwall Railway, and to amend the acts relating to it.—J. WATSON, Esq., in the chair.

The SECRETARY (J. R. Badman, Esq.) said, he had been requested by the board to represent to the meeting, that the chairman and deputy-chairman of the company, and several of the directors, were in London, attending to important matters in relation to the proceedings of the company in Parliament, otherwise they would have been present. He had also to explain that the present meeting was not called for the particular purposes of the Bristol and Exeter Company, but at the request of, and at the expense of the South Devon and Cornwall Companies. Those companies in their bills had mentioned, in connection with powers for subscribing capital and leasing the undertakings, the name of the Bristol and Exeter Company, which rendered it imperative upon them to hold the present meeting.—A PROPRIETOR said, he should be glad if their chairman could give them information as to the progress made towards the working by the atmospheric system of the South Devon line?—The CHAIRMAN said, not being on the South Devon Company's directorate, he was not in a position to give the meeting much information on the subject. He believed, however, that Mr. Samuda was very sanguine on its subject. A number of experiments had been tried, many of which had been very successful: delays had, however, occurred. Mr. Samuda expressed himself certain of success, and Mr. Brunel's opinion was also known to be very favourable. How soon the atmospheric system would be fully carried out upon this line must remain matter of doubt.

Mr. MOGG inquired, how it was that one of their own directors was supporting a competing line.—The SECRETARY regretted that the gentleman referred to was not present, as he only could give an answer to the question.—Mr. Mogg said, he did not think that any director who supported a competing line ought to retain his seat at the board. The director to whom he referred had asserted that the county was calling for a narrow gauge line. Now such a declaration ought never to have been made by one of their directors.

The SECRETARY said, he had reminded the gentleman alluded to, when in the House of Commons, of his having said, that if a narrow gauge line were made he should travel by the broad gauge, and he very candidly admitted having said so, and repeated it. His evidence so far was calculated to benefit the Bristol and Exeter Company.—The CHAIRMAN then proposed resolutions approving of the bills which the meeting went into to consider, and the same having been unanimously adopted, the meeting broke up.

DIVIDENDS ON RAILWAY STOCK.

An account has just been published of all the dividends actually paid on railway stock in England, Scotland, and Ireland, for the two years ending Feb. 1, 1847. The following are those which present the greatest diversity:—

Ardrossan—In 1845, 6 per cent.; 1846, 3 per cent.
Bishop Auckland and Weardale—1845, 10 per cent.; 1846, none.
Chester and Birkenhead—1845, 19,062*l.*; 1846, 22,702*l.*
Dublin and Drogheda—1845, 13,807*l.*; 1846, 6852*l.*
Dublin and Kingston—1845, 10 per cent. for year; 1846, 4 per cent. for half-year.
Eastern Counties—1845, 2½, 6 per cent.; 1846, 6, 6½ per cent.
Northern and Eastern—1845, 5 per cent.; 1846, 6 per cent.
Edinburgh and Glasgow—1845, 6 per cent.; 1846, 7 per cent.
Glasgow, Paisley, and Greenock—25*l.* and 12½ shares—1845, 2 per cent.; 1846, none.
Glasgow, Paisley, Kilmarnock, and Ayr—1845, 6½ per cent.; 1846, 3½ per cent.
Glasgow, Garnkirk, and Coatbridge—1845, 4½ per cent.; 1846, 9 per cent.
Hartlepool Dock and Railway—1845, 5 per cent.; 1846, 5 per cent. for first half year.
London and Blackwall—1845, 4*s.* 6*d.* per share; 1846, 6*s.* per share.
London, Brighton, and South Coast—1845, none; 1846, 3*l.* 10*s.* per cent.
North Union, stock A.—1845, 32,665*l.*; 1846, 51,340*l.*—Stock B., 1845, 10,321*l.*; 1846, 17,795*l.*
Preston and Wyre—1845, 1*l.* 7*s.* 6*d.* per cent.; 1846, 1*l.* 4*s.* 8*d.*
South-Eastern—1845, 121,041*l.*; 1846, 68,050*l.*, first half-year.
Stockton and Darlington—1845, 27,000*l.*; 1846, 23,000*l.*
Taff Vale (old shares)—1845, 6*l.* 14*s.* 6*d.* per cent.; 1846, 10 per cent.—On stock, 1845, none; 1846, 9 per cent.
Ulster—1845, none; 1846, second half year, 36,220*l.*
Wishaw and Coltness—1845, 5½ per cent.; 1846, 10 per cent.
York and North Midland—1845, 104,000*l.*; 1846, 163,000*l.*

INCRUSTATION OF LOCOMOTIVE BOILERS.—Mr. W. Naylor, of the engineers' department of the South-Western, has just reported the result of various experiments made by him in using Ritterbandt's patent for keeping boilers clean by introducing muriate of ammonia with the feed water. Mr. Naylor shows that it is a simple and inexpensive process, and that both economy and safety are studied in its use. He finds from experiment that by having one-eighth part of an inch of incrustation upon the plates of the boiler, and working at 5 lb. per square inch pressure, the incrustation acting as a non-conductor of heat causes the plates of the heating surface to be heated as high as they would have been if working at a pressure of 135 lbs. per square inch with clean plates and free from incrustation. The next advantage gained, he says, is safety, as by the boilers being kept perfectly clean the metal is never heated to a temperature that will cause a deterioration to take place—consequently, it maintains it full tenacious and cohesive powers until completely worn out. Another advantage he certifies of a clean boiler is, that the whole of the metal is heated to the same temperature, and the expansion and contraction is equal throughout.

THE "IRON DUKE" ON THE GREAT WESTERN RAILWAY.—Saturday last was selected as the day for the new engine on this railway, called the *Iron Duke*, to make its first trip, in honour of the birthday of the Duke of Wellington, which it did with the ordinary train that arrives at Paddington station at 5½ P.M. The engine has eight wheels, of which the driving-wheels are of 8 ft. diameter, the remainder 4 ft. 6 in. It has 192 square ft. of fire-box. It started from Swindon with six carriages, and attained from that town to Farringdon-road an average speed of about 55 miles per hour. At Reading it got an additional load, making a gross total of 130 tons, with which it acquired a maximum rate of 51½ miles, the last quarter of which was at the rate of 58 miles an hour. In the course of the journey one of the eccentrics got out of order, which occasioned a delay of 17 minutes at Maidenhead, and a slight delay at Slough, which, with a stoppage at Didcot of 21 minutes, and also of 9½ at Reading, and 3½ at Wallingford-road, made the entire loss of time 74 minutes. The average speed acquired between Swindon and London throughout the entire run, taking the above facts into consideration, was 53 miles an hour.

LEGS THAT FOR ELEVEN YEARS WERE SWOLLEN TO NEARLY THE SIZE OF THE PERSON'S BODY, CURED BY HOLLOWAY'S OINTMENT AND PILLS.—Mrs. Higgins, of Park-street, Wellington, Salop, caught a severe cold after a confinement, when her legs commenced swelling, and so went on until they became nearly as large as her body—breaking out into sores, and discharging a thin watery humour, which continued 11 years. The pain was generally most excruciating: every treatment was tried in vain, until at last she used Holloway's pills and ointment, which effected a perfect cure. Her general health is likewise wonderfully improved. This extraordinary case was communicated by Mr. R. Sharp, of No. 29, Park-street, Wellington.—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

The Miners' Manual, and Shareholders' Guide.

BY J. Y. WATSON, ESQ., F.G.S.

SOUTH TAMAR UNITED MINING COMPANY is situated immediately south of East Tamar, and on the same lode. Part of the sett consisting of 528 fms., extending to the banks of the River Tamar, is held on lease from Lord Mount Edgecumbe, for 21 years, from the 30th April, 1846, at 1-15th dues. Another part extending 880 fms., or one mile under the River Tamar (all of which is dry at low water, and where it is contemplated to sink a shaft), is held under lease from the Duchy of Cornwall, at the same dues, and from the same date. Mine conducted on the Cost-book System, under the same London committee as East Tamar, and managed by the same agents in the country. The company was formed in July last, and divided into 9000 shares, which were offered *pro rata* to East Tamar shareholders; 8875 were assumed, and into which number the mine is now divided; paid-up capital, 2218*l.* 15s., or 5s. per share; market value, 3300*l.*, or 7s. 6d. per share. These mines were worked extensively about 30 years since, under the name of the Beer-Alston Mining Company, and a very considerable amount of ore returned; but owing to profuse expenditure both in the country and in London, the very imperfect way the mines were worked, and the then high price of materials, the adventure was abandoned. On the banks of the River Tamar, there is a shaft known as Cowie's, which is 90 fms. under adit, at which point it takes the lode; at this point the present company are erecting a 60-inch cylinder engine, which is now approaching completion. The adit has been cleared and secured between 200 and 300 fms.; on the shaft being unwatered, levels will be driven north and south, and the shaft sunk in new ground. It is not the intention of the company to clear up the old mine till a considerable amount of new ground is brought into operation, and then only if appearances warrant it. The amount of capital required to prove the adventure will not be much, and the trial will not occupy a great length of time; much, indeed, will be seen in the ensuing summer.

STRAY PARK AND CAMBORNE VEAN MINES, in the parish of Camborne, are of great extent; in 1000 shares; amount paid up in calls, 6373*l.* 5s. 11d., or about 6*l.* 7s. 6d. per share; market value about 30*l.* per share—conducted on the Cost-book System.—Purser and manager, W. Vawdrey, Esq., Penpoll, near Hayle; agents, Capt. Eustice, and Capt. E. Ralph. The mines consist of three setts: Stray Park, Camborne Vean, and Wheal Gow. Camborne Vean, the largest, is held on lease for 21 years from 1838, at 1-15th dues—the lord being Charles Reynolds, Esq., of Trevenson. The others held for 21 years from 1844, at 1-15th dues, of the Baroness Basset. The mines have been worked by different companies a great many years, and have altogether yielded profits amounting to 200,000*l.* The present company, under the management of Mr. Vawdrey, commenced operations in September, 1840, and first returned ore in 1841, from that time to the end of December, 1846. The returns have been 12,823 tons, yielding in money 65,687*l.* 10s. 8d. The increase in the returns may be seen by comparing the first and last years, viz.:—

1841	1060 tons	yielding £ 6,194	1 7
1846	3083 tons	yielding 15,250	14 3

The profits divided by the present company have amounted to 5000*l.*, or 5*l.* per share. The present returns amount to 250 tons of copper ore per month, yielding a profit of 400*l.* per month. A dividend of 1000*l.* was declared in the past month (April). The machinery, including a 60-inch cylinder steam-engine, is most efficient. The deepest level is the 180 fm. in Camborne Vean; from this level, up to the 60, there are several rich courses of ore going west towards Wheal Francis, another sett which will soon be given to the Stray Park adventurers. As the progress of this mine, since the present company took it up, shows what may be done by good management and steady perseverance, we may state, that for six years previous to 1840, the mines were a losing concern; that when they took possession in 1840, there were 60 fms. of water in Camborne Vean, and 10 fms. in Stray Park. The eyes of the mine had been picked out, the engine and whims in a delapidated condition, and no materials on the mine for future operations. To clear out the mine, open the deepest levels, examine the lode, and get the mine into a proper state of working for future discoverjes, took three years—viz.: from September, 1840, to December, 1843. The cost of all this was as follows:—

Opening ground, 715 fms.	£4894 11 4
Cutting down Camborne Vean engine-shaft 160 fms.	1028 16 10
Steam-engine, 60-inch cylinder	1365 0 0
Engine-house, and erecting engine	450 0 0
Pit-work complete, 150 fms.	2500 0 0
Total	£10,238 8 2

Of this sum 6373*l.* 5s. 11d. were subscribed in calls (3000*l.* in 1841; 373*l.* 5s. 11d. in 1842; and 3000*l.* in 1843); the remainder was paid from the returns of the mine, which, during that period, amounted to 5351 tons, yielding 29,548*l.* The total cost of working, including supplies, tutwork, tribute, and lord's dues during the same period, amounted to 35,376*l.* 12s. 11d. The mine standing clear by the call of 3000*l.* in December, 1843; the returns from that period met the cost, and of late have left considerable profits, with ore discovered (according to the statement of Mr. Vawdrey, the manager), sufficient to return 250 tons per month for two years, without further discoveries. We may add, the accounts are made up in the fullest and most explicit manner, and a copy sent to each shareholder every two months. Reports of the underground operations are published in the *Mining Journal* monthly.

HERODSFOOT LEAD MINE, in the parishes of St. Pinnock, and Lanreath, about four miles from Liskeard—conducted on the Cost-book System—divided into 256 shares; amount paid up, 19*l.* per share; present market value, 15*l.* Purser, W. Davy Boase, Esq., Liskeard; managing agent, Capt. J. Medlen. The sett, which is three quarters of a mile in extent on the course of the lode, is held on lease for 21 years from October, 1844, at 1-15th dues; the lords being Sir W. L. Trelawney, Bart., Sir T. B. Lethbridge, Bart., and Mr. Robert Rowe. The mine was worked extensively some hundreds of years ago, the lode was well known, and laid down in all ancient maps. The present company commenced operations on the 21st October, 1844, and found the mine 52 fms. deep, which depth had been reached by water power, by the previous company, who returned ores to the value of 7000*l.* The present party found no great riches within reach of the old workings; but, upon sinking 20 fms. deeper, a greater length of ore ground has been opened, and a considerable improvement in depth—the ground being doubled in value from the 62 to the 72, which is the present bottom level; the lode, however, will be soon seen at the 82 fm. level. There has lately been an important discovery made at the northern part of the mine; the 62 being driven 7 fms. further in that direction than the others (which were stopped for poverty), has opened a course of ore, worth 12*l.* or 14*l.* per fathom, which has lasted through many fathoms, and still continues. The returns of lead have been 45 tons, yielding 716*l.* 5s. The machinery, consisting of a 40-inch cylinder pumping engine, water-wheels for drawing and crushing, crusher, &c., is valued at 2000*l.* The present returns nearly pay the cost; the operations have been spirited and judicious, and there is a prospect that the adventurers, ere long, will be repaid for their outlay.

WEST CARADON COPPER MINE, in the parish of St. Cleer, near Liskeard; in 256 shares, 20*l.* per share paid up; market value, 160*l.*; conducted on the Cost-book System.—Purser, E. A. Crouch, Liskeard; agents, Capts. Vivian and Dunston. The sett, in extent, is 350 fms. on the course of the lodes, and about the same north and south; held on lease for 21 years from 1840, at 1-15th dues—the lords being Mrs. Fookes and Mr. F. Hendra. The mine commenced working in March, 1840, and has returned ores to the end of 1846, yielding 116,207*l.* 5s. 10d. The outlay on the mine has been:—For labour to end of 1846, 58,095*l.* 11s. 8d.; for materials and machinery, including four steam-engines, 35,666*l.* 19s. 10d. The profits divided among the shareholders to the end of 1846, amount to 25,920*l.* In February last, another dividend of 896*l.* was declared, making the total 26,816*l.* The mine is, at present, working to a profit of about 400*l.* per month, and employing 478 persons. The works have been rather impeded by want of a shaft northward for ventilation, and for drawing ore and stuff; when this is remedied, more ground will be laid open on the productive north lodes. From the present workings, however, the mine is as before stated, making a handsome profit, and the deepest level is a good one, which promises well for the future. A new and productive lode (Gilpin's), has been lately discovered in the 17 fm. cross-cut, driving northward. A statement of the accounts for January and February last appears in another column, showing a profit on the workings to that period of 1978*l.* 13s. 4d.—which, with former balance, enabled the directors to pay a dividend of 3*l.* 10s. per share, and carry on 2727*l.* 8s. 10d. to the credit of the mine.

WHEAL SISTERS COPPER MINE, in the parish of St. Neot; divided into 256 shares, 29¾*l.* per share paid; market price, 35*l.*; conducted on the Cost-book System.—Purser, E. A. Crouch; manager, Capt. Nance. The sett, which in extent, is from 150 to 350 fms. on the course of the lode, is held on lease for 21 years from 1842, at 1-15th dues—the lords being the owners of Tremorkin, and W. Glencross, Esq. Operations were commenced in May, 1842, and ores have been returned to the value of 8004*l.* 13s. 9d. The outlay has been in labour, &c., to end of 1846, 10,804*l.* 1s. 2d.; in materials and machinery, including a 36-inch cylinder steam-engine, 4970*l.* 5s. 7d. The mine was worked at the adit level, without machinery, to sink deeper, before it was taken by the present company, who erected the engine which drains the mine, and also lifts water to go over a water-wheel, by which the stuff is drawn, and the ore crushed. The mine is in a prosperous state, and the sale of ores for the last two months left a considerable profit. The number of persons employed is 98. A report of the last meeting appears in another column.

Erratum.—The first East Wheal Rose dividend, this year, was paid on the 17th Feb.—they are paid regularly every two months.

[*To be continued in next week's Mining Journal.*]

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—The lode in the 18 fm. level end west is pretty much the same as last reported—worth about 18*l.* per fm.; the rise behind this end is also the same. The 12 fm. level end is producing less ore at present—worth about 10*l.* per fm. The stopes, or middle lode, from the 12 to the 18 fm. level, perpendicular, are improved in regularity, and producing more ore—worth from 16*l.* to 18*l.* per fm. In the winze sinking under the 18 fm. level, at this point, we have cut ground south, and discovered some favourable branches, containing lead ore; taking a perpendicular course down, we still continue to cut south. We have done very little on the lode at Clon Mine since my last; it presents precisely the same appearance there, both in underlay and the stratum formed in, as at Angle's east. At surface, we have no further change this week.—T. ANGOVE; G. WHITE: April 30.

BEDFORD UNITED.—At Wheal Marquis, the lode in the sump winze, under the 80 fm. level, is 3 ft. wide, and worth 20*l.* per fm. In the 80 fm. level east we have not yet got through the capels (now cut into about 5 ft.) of the lode—the same having proved very much larger and harder than we had calculated on. In the 70 fm. level east the lode is 2 ft. wide, composed of spar, mundic, and ore. The lode in the 58 fm. level east is 18 in. wide, spar and mundic, with spots of ore in places. The pitches, on the whole, are looking very favourable. At Liscombe, the lode in the adit level east is 18 in. wide, and very kindly; and in the rise in this level the lode is 2 ft. wide, producing good stones of ore. The lode in the south engine-shaft is 3½ feet wide, producing some saving work, and very promising. In the adit level east the lode remains without alteration. We weighed, at Morwelham, on Friday last, Feb. ores, and sampled March ores, computed 119 tons (21cwts.)—J. PHILLIPS: May 2.

CALLINGTON.—You will be pleased to hear, we are again in course of sinking the shaft at Kelly Bray, which is now 15 fms. deep, with favourable ground. In the 100 fm. level, driving south from the north engine-shaft, the ground continues soft, with a small branch of silver-lead ores; the back will work at a moderate tribute; in the north end the lode is poor. In the 90 fm. level south the lode has not been taken down, the appearances of the wall are good. In the 80 fm. level south the lode is small, producing silver-lead ores. In the 70 fm. level east, on the copper lode, no alteration has taken place; the distance between the silver-lead lode, and the cross-course considerably increases as we go south from the north shaft, otherwise we should have met with the same previous to this time. In the 40 fm. level east, on Kelly Bray lode, we have driven through 7 fms. of cross courses, with the exception of about 9 ft. of clay-slate; at present it appears we have got through the same. In the 125 fm. level north, at the south mine, the lode has not been taken down; where the wall of the same is broken, it shows a good stone of silver-lead ores; no alteration in the south end. In the 112 south the lode is 1 ft. big, producing silver-lead ores. In the 100 south we are opening ground that will work at a moderate tribute; the north end is also driving through tribute ground. No lode has been taken down in the ends in the 90 fm. level. In the 80 fm. level we have still a small, but rich, branch of silver-lead ores.—J. T. PHILLIPS.

COOMBE VALLEY QUARRY.—We have now cut through and entirely removed the strata of killas that intervened between the soft and marketable floors of slate. The watery strata is fast disappearing; and from the lowest depth we have got (viz., 24 ft.), we are raising slabs of from 12 to 20 ft. each, of a most beautiful colour and fine texture, which, immediately we get a saw and planing mill to work, we shall send into the London market. We find it is not yet sufficiently hard to admit of being cleft into large roofing slates; and as the small kind is not of great demand, we think it better to wait a few weeks longer, before we begin to manufacture. The plant of machinery (lately purchased at the Davidstow Limestone Quarry) is being removed and refixed on our works. Two lines of railway are laid, one leading to the spoil heap, and the other for the permanent way. We are erecting a small water-wheel, to drive the pump and a set of grub saws; at present our hauling is done by horse-power from the whim, but we hope in a short time to get a powerful wheel to work on the reversing principle. We have, in consequence of the lowest floor turning out such fine slate, considered it prudent to open more ground, our operations being on a very confined scale; and it is also essential that we should do so, to ensure safety to the quarrymen, who are at present exposed to great danger. We are already making slate; and, from the appearance of the present state of the quarry, we have every reason to believe profitable returns will in a very short period be made. We earnestly solicit persons interested in this, or similar undertakings, to pay a visit to this quarry, and we feel very well assured they will profit by so doing. The direction is, Wanehouse Corner, between Launceston and Camelford.—C. S. RICHARDSON.

DEAN PRIOR AND BUCKFASTLEIGH.—We are getting on with the sinking of the winze in the bottom of the 30 fm. level; I have set 4 fms. to sink, at 15s. per fm.—therefore, I expect to hole, so as to ventilate the level, in the course of five or six days. In the 40 fm. level, the south part of the lode is much improved—present price for driving, 3*l.* 10s. per fm. In the rise at the back of the 50 fm. level, we are getting on as fast as we can, and have this day been drawing some good work from that part of the mine. We are anxious to hole to the 40 fm. level with all possible despatch, as a greater number of men ought to be driving west on the course of the lode in the 50 fm. level, and thereby lay open a larger extent of ore ground. At present we have only air for two men to work in this end, and the lode is of the most promising character, and producing some saving work; and I am of opinion, that we are just passing through the top of another shoot of yellow ore, which is most encouraging for sinking, as well as going to hill.—H. CHOAKE: May 4.

DEVON AND COURTENAY CONSOLS.—We have cut the lode in the 30 fm. cross-cut, at engine-shaft, although the end is in 6 fms. 0 ft. 6 in.; this shows the lode is not underlaying as fast as we calculated, but I am expecting to cut it every day; we cut a branch on Wednesday last, underlaying north towards the lode—this is the third branch that we have cut—two underlaying towards the lode, and one with the lode, and all three producing good stones of ore; the ground is much better for driving since we have cut this branch than it was before. The ground in deep adit, on south lode, is something better for driving—now set for 6*l.* per fm., which is 30s. less per fm. than the last 3 fms. were driven for; lode 20 in. wide, composed of mundic, spar, killas, and some ore. There is very little alteration in the appearance in the shallow adit, on north lode, since my last. The lode in flat-rod shaft, on north lode, is looking more promising than it has for the last 4 ft. that have been sunk, —now producing some good stones of ore.—J. JOB: May 4.

DRAKE WALLS.—Since my last, the stope (bottom) at engine-shaft is rather improved; we have one large branch very rich, other small branches tinny; in the top stopes, east of the above, there is good saving work. I hope to resume sinking the engine-shaft, below the 50, after this month, when the stopes will be so far off the shaft, as to enable us to do so. The 40 fm. level east, under the arch ground, is hard, and not rich. At machine-shaft, the back of the 50 fm. level west is much improved, good branches of tin, and large, worth 16*l.* per cubic fm.—price for stoping, 65s. In the 50 fm. level west good branches, ground hard; in the back of the 50 east good branches of tin. The stopes, east of machine-shaft, are tinny. The 33 fm. level east, under the arch, we have resumed driving, good branches. We sampled for the last two months 18½ tons of tin, and hope to sample the same quantity the next two —R. WILLIAMS: May 1.

EAST TAMAR CONSOLS.—At Whitson, we have cut the lode in the cross-cut 4 fms. below the 60 fm. level; the lode is 14 in. wide, producing good stones of lead ores—a very kindly lode. The lode in the 60 fm. level north is 14 in. wide, composed of capel, spar, and ores; the lode in the 60 fm. level south is 15 in. wide—good saving work. The lode in the 54 fm. level south is 2 ft. wide—saving work; the 54 fm. level north is still in slidy ground. The lode in the 46 fm. level, south from Gourd's shaft, is 2 ft. wide, fluor-spar and lead ores—good saving work. At Furzehill, the lode in the shaft is 18 in. wide—good saving work. The lode in the 46 fm. level north is 18 in. wide, work of a good quality; the lode in the 46 fm. level south is 2 ft. wide, fluor-spar and lead ores—good saving work. The lode in the 38 fm. level north is 15 in. wide —saving work; the lode in the 38 fm. level south is 18 in. wide, work of a good quality.—B. ROBINS: May 4.

GREAT MICHELL CONSOLS.—The engine-shaft is down 11 fms. 1 ft. 6 in. below the 22 fm. level, in which the lode is composed of spar, mundic, fluor, and stones of ore. We shall resume the sinking of the western winze on the morrow.—T. RICHARDS: May 4.

GREAT WHEAL FREDERICK.—This mine is situated at the foot of the noted Caradon Granite Hill, in the parish of Linthinghorne. There are three lodes that run through this sett, all of which have been worked by "the old men" as deep as they could go without machinery. I have discovered the arches of tin on the north lode, from 5 to 6 in. wide, nearly solid, which were left as props for the ground, instead of timber; and it is well known, that a solid lode, or leader of 1 inch, will pay handsomely. We have cleared up 2 or 3 fms. under these arches, and have discovered the lode, which is very rich for tin; but the water being so quick, I am unable to give any absolute statement of its size—the samples I have sent you were broke from this place. We have cleared up several other places on the line of this lode, for 20 fms. in length, and, whenever we could get down on the lode for water, we could break excellent stones of tin. We have also sunk a shaft on the middle lode about 8 fms. deep, and have broken good stones of tin; but was obliged to abandon the shaft on account of the water; the lode in this shaft is about 2½ ft. wide, underlying south about 3 ft. in the fm., and its course is about 15° north of west; the strata are a red clay slate, within 20 fms. of a beautiful decomposed granite. We expect all the lodes will be completely in granite at the depth of 30 fms., as the slope of the granite hill is bearing down very fast. The south lode, which is well known as the Great Shelstones lode, has been worked to the depth of 25 fms. from surface. An adit has been driven for upwards of 150 fms. on the course of the lode, and nearly all the backs have been taken away, only leaving arches as props for the ground. We are now clearing out this adit, and, by so doing, are frequently finding good stones of tin, which were left behind by the old men. Our intention, in clearing up this adit, is to get up to the bunch of tin gone down in the bottom of it, on the top of the hill, which I have been informed by the late Capt. Hooper is 25 fms. in length, and, to use his own expression, worth from 800 to 1000 tons per 100 sacks. There are also several old miners living in the country that give just the same statement, and assure me that nothing is wanting but the erection of machinery to put this mine in a position to pay good dividends. There is a sufficient supply of water in the well-known Caradon Coombe, which comes into the sett, and where about 16 years ago there were not less than 6 stamps continually stamping tin from the adjoining mines, worked by labouring miners at the shallow levels, so far as they could go for water. We now intend to erect a water-wheel, and sink on the bunches of tin gone down in the bottom of the Great Shelstones adit. I do firmly believe, by an outlay of from 600*l.* to 800*l.*, this mine will be put in a position to work all the lodes, and that it will handsomely remunerate the adventurers for their outlay. The tin in this mine is of a most excellent quality, and can be sent to the smelting-house without burning, as there is no mundic, or any other brood, to affect the quality of tin.—JOHN SPARGO: *Downgate, May* 1.

GUNNIS LAKE.—At Chilsworthy, I beg to inform you, that the lode in Bailey's engine-shaft is 2½ ft. wide, producing good stones of ore, and very kindly. In the 12 fm. levels east and west there is no alteration.—WILLIAM RICHARDS: May 4.

HAWKMOOR.—In the 15 fm. level, east of Hitchins's shaft, the lode is cut off by a slide, and the men are driving north, in pursuit of the same.—P. RICHARDS: May 4.

HEIGNSTON DOWN CONSOLS.—The lode in the 20 fm. level west is 2 ft. wide, producing good work; the pitch in the back of this level is looking well. In the 20 fm. level east the men are at present employed in taking up a stope in the bottom of the level, which produces some good work.—W. RICHARDS: May 4.

HOLMBUSH.—The shaftmen are still employed in fixing the diagonal rods, balance-bob, &c., preparatory to resume sinking the diagonal shaft below the 120 fm. level—so that nothing has been done in the shaft during the past week; the lode in the 120 fm. level, west of the great cross-course, is 8 in. wide, composed of spar, mundic, and spots of ore; the lode in the 120 fm. level, east of Hitchins's shaft, on the north part, is 18 in. wide, composed of mundic and stones of ore, and the ground more favourable for driving—being still at 5*l.* 10s. per fm.; we have 8 fms. more to drive to make a communication to the next winze, sunk below the 110 fm. level some considerable time since. The lode in the 110 fm. level, east of Hitchins's shaft, on the south part, is 9 in. wide, composed of spar and stones of ore of good quality; the lode in the 110 fm. level south is 20 in. wide, composed of spar and lead, worth 8*l.* per fm. The lode in the 100 fm. level south is 2 ft. wide, composed of spar, prian, and lead, worth 7*l.* per fm.—the ground in these two last mentioned levels is materially altered, and the lode more compact and settled than it was found to be heretofore, much less flookan in the lode, and the strata a white killas, that the levels will stand without being timbered—so that a saving will be effected in that article; the lode in the rise, above the 100 fm. level, is without alteration. The lode in the 90 fm. level south is 20 in. wide, composed of spar and spots of lead—a lode of greater promise than we have ever seen in this level previously to the present time. We weighed, at Calstock Quay, on Friday last, March ores, 85 tons 1 cwt. 2 qrs.; and sampled, April ores, computed 83 tons. —W. LEAN: May 4.

ILAM.—The lode in the 42 fm. level is 2½ ft. big, spotted in places with copper; in the lode in the back of this level, where I put the men to rise, we have broke some good stones of copper—a promising lode. The lode in the 67 fm. level, west of Robins's shaft, is still large, and carrying a little copper; the lode in the 67 fm. level, east of Robins's shaft, is just the same as when I wrote last—I will give you all particulars in my next.—J. SPRAGUE: May 5.

KIRKCUDBRIGHTSHIRE.—The lode in the end west, in the 40 fm. level, is 2½ ft. wide, producing a half ton of lead per fm. The lode in the 30 fm. level, west end, is 5 ft. wide, producing 1½ ton per fm.; driving east on the caunter at this level, the lode is 6 ft. wide and regular—worth 15*l.* per fm.—these ends are now 5 fms. 3 ft. apart; the lode in the end east, in this level, is 4 ft. wide, with a little lead, and likely for an increase; the stopes in back of this level look much the same as last reported. In the lode in the 20 fm. end east, from the dip of incline of the caunter, compared with that of the main lode, we consider the junction will be discovered about 5 or 6 fms. before the end west in the 20 fm. level; we are, therefore, preparing to resume driving this end. Keith's shaft is 27 ft. deep—water very abundant, but no rock. We have about 30 tons of lead ready for the market, and a vessel is engaged to ship it on Tuesday the 4th inst.—J. BUZZO: May 1.

LANIVET CONSOLS.—The leader part of the lode in the 80 fm. level west, on the north part of the lode, is much as last reported—we intend to cut through the lode in this end; in the 80 fm. level east we are driving on the the south part of the lode, which is 2 ft. wide, producing but a small quantity of ore. In the 30 fm. level east we are also driving on the north part of the lode; the leader part is 2 ft. wide—saving work.—H. WILLIAMS: May 1.

MENDIP HILLS.—The 38 fm. level is extended about 30 fms. south of Stainsby's shaft, where the lode is 6 ft. wide, composed chiefly of flookan and white spar, with large stones of good quality lead at times; the ground continues favourable for driving, price 40s. per fm; some short distance further south than the present end, there are to be seen at surface several lodes, which intersect the one we are now driving on; at which point, from the promising appearance of the end, and the favourable results which often take place at the junction of the lodes, I anticipate some improvements. In the slag department, I have but little to communicate this week—our principal operations are at present in cutting through the wood, levelling the ground, and making every preparation for laying down the launders, in order to take the water around the hill, also in removing the top rubbish from the slags, which are being done with all possible dispatch.—F. C. HARPUR: May 3.

NORTH WHEAL FRIENDSHIP.—This mine is situated in the parish of Mary Tavy, and is about six miles north-east of Tavistock, and within half a mile of the western extremity of the mass of granite called Dartmoor. It adjoins Hill's-bridge, and was formerly named Wheal Saturday, although never worked. I should have given a report of this mine some weeks ago, but we came so immediately upon a rich course of tin, and the indications in the shaft were so flattering, that I was fearful, by hastily expressing my opinion of this lode, as it was then in sight, I might be considered to exceed the facts. I thought it, therefore, adviasable (as we have been from the first breaking splendid stones of tin, from 40 to 50 lbs. weight, nearly, or quite, half tin) to wait until I saw the result of the surrounding branches coming in contact with the lode. I am now most happy to say, they have greatly enriched the lode, and the mine far exceeds a speculation. I do not scruple to say that, in a short time, if we extend our lodes sufficiently, we shall be in possession of some hundreds, if not thousands, of pounds worth of tin. The sett is very extensive, being nearly a mile from east to west, and half a mile from north to south. It is admirably situated for water-power, as the River Tavy bounds the whole eastern extremity of the sett, and will put the mine down to any depth. There are three very kindly lodes that run through the sett, but we have as yet only opened on one, which is from 1½ to 2 ft. wide, and has a most splendid appearance, going down nearly pendicular, and carrying two well-formed walls. This lode has a decided advantage over most tin lodes now discovered, or working, in Devon and Cornwall. It has not been previously discovered, or worked out on the backs—consequently, you have no outlay, as is generally the case in getting below "the old men's workings." We have sunk a shaft about 3 fms. from the surface, on the course of the lode, at the lowest point of the sett, near the Tavy; and in this operation only have broken a most excellent pile of tin (now visible at surface), of good quality. We are now driving west on the course of the lode, and are continuing to break excellent stones, from 40 lbs. to 50 lbs. weight. We have also broken good stones of copper on the south part of the lode (a sample of which I will send to the offices of Messrs. Crossman, Sommers, and Co., in London). The ground rises as we drive west, which we shall be able to stope away on tribute. We have cut the lode at the surface in two or three pits, from 40 to 50 fms. west of our shaft, and have broken good stones of tin, as well as copper, in all of them; the lode in the back is about 3 ft. wide, composed of felspar, flour-spar, wolfram, and black capel—the latter carries the tin and the copper. We must now make preparations for the stamps, as I see myself clear in stating, that we must raise abundance of tin—more especially if we continue to trace the lode in the back, and you sink other shafts on the course of the lode.—JOHN SPARGO: April 30.

PENTUAN WHEAL MARY.—Since I wrote you last, about 2 fms. have been driven on the lode, which is now about 2 ft. wide, and without any material alteration in its appearance; the ground, however, is a little more favourable—40s. per fm. is now the price, and 6 men are employed in driving; we may, therefore, expect to make a greater progress in future than we have hitherto.—J. HITCHINS: May 5.

SILVER VALLEY.—In the engine-shaft we shall now commence cross-cutting north towards the tin lode for a 50 fm. level—the ground is very favourable. At the silver mine, the lode in the 30 fm. level, driving west, is about 15 in. wide; the south part contains a little lead and traces of silver, and altogether the lode has a favourable appearance. In the 20 west the lode is about 7 in. wide, spotted in places with silver and silver-lead ore, from which we are saving a little work, but it is not rich; the lode in the stopes, in the back of this level, is producing some tolerable good work. In the 10 fm. level east the lode is divided into branches, which are composed of flookan, carbonate of iron, and mica, with a spot of silver, and small cubes of lead, occasionally. At Wheal Brothers, in the deep adit level west we can get in from the western whim shaft 85 fms.; and the lode, where it can be seen between the timber, varies in size from 4 to 20 in. in width, and in places it has a very kindly appearance indeed. The parcel of silver ore, referred to in last report, was sold on Saturday last for 20*l.* 6s. 4d.—S. RICHARDS: May 3.

SOUTH TAMAR UNITED.—The engineers will be in course to put the

engine to work on Thursday next, the 6th inst., we have fixed two drawing lifts to commence with, that we may get the water out as expeditiously as possible. The men in the adit level have cleared and secured 30 fms. north from Monday's shaft.—B. Eobins: May 4.

SOUTH FRIENDSHIP WHEAL ANNE.—Since my last report, we have cleared up the mill-house shaft, which is 10 fms. from the surface, and sunk on the course of the lode. The late adventurers have driven the 10 fm. level east of this shaft about 25 fms., on a splendid-looking a lode as ever I saw, varying in size from 2 to 4 ft., composed of blue peach, black capel, fluor-spar, spots of bright yellow copper, and mundic, stones of very rich gossan corroded with greens, and spots of malleable copper. If the lode in the 52 fm. level (to which depth we are now about to fork the water) is equal in quality to the above, I do not hesitate to say, the mine is well worthy the bold and spirited operations which have been carried out at surface, to put her in full working condition; we are getting our rods in order, to drop our lift to the 28 fm. level. The sump-men have completed cutting down the shaft, and will shortly commence casing and dividing it. We have two men rising on the back of the 10 fm. level, just under the bunch of ore that is gone down in the lobby, where we hope to return some tons of copper.—J. Spargo: April 30.

SOUTH WHEAL MARIA.—The plat is completed in the 20 fm. level under adit, and we have commenced cross-cutting both north and south, by six men in each level, in ground of about 5*l.* per fm. We calculate on intersecting the first lode north, on which an adit level has been driven upwards of 50 fms., in the course of three weeks or a month from this time.—G. Francis.

TRELEIGH CONSOLS.—In the 110 fm. level, east of Christoe's, we have driven through a branch this month, but are not far enough north for the lode, and shall still continue the cross-cut. In the 100 fm. level, east of ditto, the lode is 3 ft. wide, but very little mineral. We have set a winze to sink below the 90 fm. level—this will come down on the present 100 end; in Garden's shaft, below the 90 fm. level, the ground is very hard. In the 90 fm. level, west of ditto, the lode is about 2 ft. wide, worth 6*l.* per fm. In the 80 fm. level, west of ditto, the lode is 3 ft. wide, worth about 12*l.* per fm.; in the rise, above the 80 fm. level east, now (for ventilation), the lode is 2½ ft. wide, worth 35*l.* per fm.; the 80 fm. level end east, is worth about 20*l.* per fm., but suspended in order to rise towards a winze south under the 70 fm. level. In the 70 fm. level, west of ditto, the lode is 2 ft. wide—very promising, with good stones of ore. The winze, below the 90 fm. level, east of Christoe's, new; east of the flat-rod winze, we think the lode, to commence with, is worth 25*l.* per fm.—you shall know more about this in next week's report. In the bottom of the 70 fm. level, east of Symons's, we shall stope from Symons's shaft 12 fms. east, which is a very kindly lode—I will give a better description of it in next report. In the 60 fm. level, the lode is 2 ft. wide, worth 7*l.* per fm.—W. Symons: April 30.

UNITED HILLS.—In the 90 fm. level there has been nothing done during the past week, in consequence of our changing a piece of rod; we hope to commence working to-morrow morning. In the 80 fm. level, eastern end, the lode is 3 ft. wide, worth 18*l.* per fm.; west of cross-cut the lode is 2 ft. wide, worth 14*l.* per fm. In the 70 fm. level, east of eastern shaft, the lode is 2½ ft. wide, worth 12*l.* per fm.—this end is improved since last reported; in the eastern shaft the lode is 3½ ft. wide, worth 20*l.* per fm. The 60 fm. level has been suspended since July last; in the shallow adit the lode is 4 ft. wide, worth 7*l.* per fm. At Wheal Charles, in the 50 fm. level, nothing done for the past week. In the 40 fm. level, eastern end, the lode is 3 ft. wide, worth 6*l.* per fm.; in the winze the lode is 2½ ft. wide, worth about 4*l.* per fm.; the lode in the stopes is 3 ft. wide, worth 16*l.* per fm. At Wheal Sparrow, in the 40 fm. level, eastern end, the lode is 18 in. wide, producing but little ore; in the western end the lode is 2 ft. wide, worth 6*l.* per fm. In the 30 fm. level the lode is 7 ft. wide, worth 18*l.* per fm. In the 20 fm. level the lode is 2½ ft. wide, worth 3*l.* per fm.; in the adit level the lode is 15 in. wide, poor.—Thomas Trevenen; Robert Williams: May 4.

WEST WHEAL JEWEL.—In the 115 fm. level, east of Hodge's cross-course, on Wheal Jewel lode, lode 18 in. wide, composed of soft spar, can, prian, and ore, with a promising appearance—drove last month 2 fms. 2 ft. In the 100 fm. level west, on same lode, lode 9 in. wide, grey—drove last month 1 fm. 3 ft.; in the winze, in the bottom of the 100 fm. level, east of Hodge's cross-course, on same lode, lode 18 in. wide, unproductive—sunk last month 2 fms. 2 ft. In the winze, in the bottom of the 85 fm. level, west of cross-course, on same lode, lode 1 ft. wide, composed of can, and spar, with stones of ore—sunk last month 1 fm. 4 ft. In the 70 fm. level, west of Williams's cross-course, on same lode, lode worth 7*l.* per fm.—drove last month 2 fms. 3 ft. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, lode 2 ft. wide, worth 5*l.* per fm.—drove last month 2 fms. In the 12 fm. level, west of Quarry shaft, on same lode, lode worth 12*l.* per fm.—drove last month 1 fm.; ditto south, 1 ft. 6 in.; in the winze, in the bottom of this level, lode 20 in. wide, worth 10*l.* per fm.—sunk last month 2 fms. 1 ft. 9 in. The stopes in the bottom of the adit, east of Pryor's winze, lode 3 ft. wide, worth 25*l.* per fm.—stoped last month 5 fms. 1 ft. In the stopes in the bottom of the 12 fm. level, east of George's winze, on same lode, lode 2½ ft. wide, worth 20*l.* per fm.—stoped 6 fms. In the adit end, west of Quarry shaft, on same lode, lode 1 ft. wide, worth 12*l.* per fm.—drove 2 fms. 1 ft. 6 in. In the 12 fm. level, west of old sump-shaft, on same lode, lode 1 ft. wide, worth 10*l.* per fm.—drove last month 2 fms. 5 ft. 6 in.; in the 12 fm. level, east of Reeves's, winze, worth 6*l.* per fm.—drove 2 fms. 4 ft. 9 in.—R. Johns: May 3.

WEST WHEAL MARIA.—The eastern engine-shaft is down 35 fms. 1 ft.; the lode in this shaft is 5 ft. wide, composed of capel, spar, mundic, with good stones of ore in places, and ground a little more favourable for sinking. The western engine-shaft is down below the 54 fm. level 3 fms. 4 ft.; the lode in this shaft is much the same, producing spots of ore in places. In the 54 fm. level, east of this shaft, the lode is about 20 in. wide, producing spots of ore; in the cross-cut south, in this level, the ground is rather hard for driving.—Thomas Rodda: May 4.

WHEAL ADAMS.—We have so far secured the crush between the 40 fm. and 50 fm. level, in the new engine-shaft, that the pitmen are now in a fair way of clearing, sinking, and timbering, and we hope to reach the 50 fm. level in the course of a few days. You may rely on our doing everything in our power to expedite this. The 40 fm. level, driving south, on the western lode, continues large and promising, consisting of lamellar hornstone, containing lead and antimonial sulphuret of silver, with the joints filled with chlorite and galena; the ground in the cross-cut, extending westerly towards the copper lode, is still favourable for driving, but we have suspended operations here whilst the men are extending a level north and south, on the eastern, middle, and western veins, which have united south of the slide, forming a lode about 18 ft. wide, consisting of slate, with masses of gossan and granular galena disseminated throughout; this will soon lay open tribute ground: and as soon as the men extend the levels out of the reach of the cross-cut, the driving of the latter will be forthwith resumed; we have cleared and secured several fathoms of this level, extended north on the course of the eastern lode, and expect to reach the end in the course of the present week; when this is accomplished it will be dialled, to ascertain how far we have to drive to reach the low ground, where a good deposit of lead was discovered in an upper level, as also to put us in a position to intersect both the middle and western veins in this direction. The cross-cut in the 18 fm. level was extended 2 fms., when a vein of flookan was cut through, which let down a stream of water, that would evidently have retarded the operations in the new engine-shaft; but we dammed it back, until this most important work shall have been completed; the pitches are producing a fair quantity of orey stuffs, all of which are being prepared for market as fast as possible. We shall commence a series of experiments next week on the gossans, &c., &c., from the 18 and 28 fm. levels, of which large quantities containing silver can be obtained.—J. Prince: May 4.

WHEAL ALLEN.—We have lately holed a shaft in the level going into the hill—the depth of which, to the back of the level, is 19 fms. 4 ft. 6 in.; we are continuing to drive from this shaft into the hill with a full pare of men, on a lode varying in size from 1 to 2 ft., the direction of which is nearly north—it is composed of spar, gossan, and good stones of yellow and black ore, and letting out much water; the stratum is congenial for mining, it being of soft white killas, such as is generally found at shallow levels in productive time, varying in price from 30*s.* to 3*l.* per fm.; as this end advances, it increases in depth, at the rate of 1 fm. in 7 fms., its present depth being about 22 fms. The chief objects of these operations (although the present lode is well worthy of trial), is the intersecting east and west lodes, which will be intersected at right angles by the direction of the lode we are now driving on; we expect there are three lodes to be intersected, the northernmost being about 80 fms. north of present end, which can be reached without another shaft. This lode has been costeaned for many fathoms; it is now about 2 ft. wide, composed of gossan and stones of yellow ore—a very promising lode; the depth from the present end will be about 34 fms. On the other lodes, which are not so far north, nothing has been done; they are to be seen in a lane—but the land being rich, and the rock deep from surface, the lord of the land is against costeaning for these two lodes, and the driving the adit will shortly determine whether they are regular or not. From present appearances, and from what we have already seen, it may be fairly calculated to reach the northernmost lode in 14 months—at most, perhaps, one year, and for about the cost of 1*l.* per 1-256 share. It is impossible to say what the result may be; but, certainly, the speculation holds out advantages seldom to be met with.—H. Williams.

WHEAL BARBARA.—We are sinking the new shaft, called Williams's shaft, by eight men—ground harder than when I set it to the men—down between 3 and 4 fms. below adit; and, in sinking, we daily meet with branches, or droppers, directing their course to the lode, all richly mineralised; these circumstances, coupled with the rich appearance of the lode at the adit level, leads us to expect something good and promising at the 10 fm. level. We are also driving the adit end east by four men, and have had a very promising lode for many fathoms behind the end; and it is my opinion, that we have been passing over some good ore ground; but, being only about 4 fms. from surface, could not expect to meet with it at such shallow depth.—H. P. Stephens: May 4.

WHEAL CONCORD.—I have fully complied with the orders contained in your letter of the 28th April, and there are now only six miners employed underground—two on the rising above the 20 west, where there is a promising lode 2 ft. wide. The dressing pare will get all the ore marketable by the end of this week, which will be about two tons, and then they will also be discharged. Capt. Lean has not yet made his inspection here, in consequence of being prevented by business. I am informed he intends coming on Monday next. In the meantime, however, permit me to offer a few supplementary remarks to my report of the 10th April, and other letters in reference to the future government of the mine. I consider the 20, 28, and 38 fm. levels west, should be vigorously prosecuted; that 6 men should be employed to rise above the 50 on the lode, and 6 to sink towards them below the 38 for the engine-shaft; and when they hole, to commence immediately and sink below the 50. One level, at least, should also be driven east on the lode, and the rise continued above the 20 west, as well as the 38 cross-cut south, towards the southernmost lode, which I think is about 11 fms. before the end. This is the plan which I judge most likely to bring the mine into a profitable state. There are about 75 fms. between our western ends and the boundary of the sett, beyond which, about 36 fms., Wheal Grace Company are carrying on vigorous operations; and this, added to the promising aspect of the lodes, should be a fresh stimulus to your perseverance and exertions. To carry on the works enumerated above would require 40 miners, who, with the necessary labourers, staff, and materials, would cost from 300*l.* to 310*l.* per month.—J. B. Clymo: May 6.

WHEAL EMMA.—Saturday last being the monthly setting-day, the bargains were set as follows—viz: The engine-shaft to sink below the 22 fm. level—price 18*l.* per fm. In the end driving east, in the 22 fm. level, the north lode is 3 ft. 6 in. wide, composed of flookan, spar, and mundic—price for driving 55*s.* per fm. In the adit level, Brookwood, the lode is 3 ft. wide, composed of spar, flookan, and mundic, a promising lode—price for driving 30*s.* per fm.—H. Choake: May 4.

WHEAL TRELAWNEY.—The lode in the 42 fm level, north of Phillip's shaft, is 3½ ft. wide, and worth 20*l.* per fm.; the lode in this level south is 3 ft. wide, and is worth 26*l.* per fm. The lode in the 32 fm. level, north of Phillip's shaft, is 2½ ft. wide, and worth 18*l.* per fm. The lode in the winze, under the 22 fm. level north, is 2 ft. wide, and worth 16*l.* per fm. All the stopes are looking well. Phillip's shaft is sunk 3 fms. under the 42 fm. level; Trelawney's shaft is sunk 7 fms. under the 22 fm. level; and Vivian's shaft is sunk 12 fms. under the surface.—Peter Clymo, Jun.: May 3.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINES—*Congo, March* 1.—Since my respects of the 11th Feb., I have been unceasingly occupied on the business of Bananal Mine, and have, during most of that time, been absent from Congo. I am happy to inform you, that Captains Pengilly and Luke have made a very accurate survey and map of all the mineral grounds, and their labours have received the official sanction and recognition of the Government office (the *Guardamor Geral*). I expect Dr. Vianna, our lawyer, here during the present week, in order to meet the various proprietors, and thus conclude this protracted negotiation; and, before I have again the opportunity of addressing you, I hope we shall be in full legal possession; and though not yet so, still our time is not being wholly lost, as our artificers have for some time been actively at work in preparing the necessary machinery.

Gold workings for the month of Feb.:—11 lbs. 4 ozs. 4 dwts. W. J. Hexwood.

NATIONAL BRAZILIAN MINES.—The prospects of the mine are still favourable; the eastern part of the works are looking very promising, and our expectations in that quarter are considerable. We have now an enormous extent of stopes opened—enough for 100 additional negroes—and the stone is known to be good, for we have extracted it fairly, and the produce is encouraging. We have discovered a branch of soft jacetinga; it is very irregular, but small, varying from 1 to 4 ft. big—but is rich.

PRODUCE.

Cocaes—February	3	.....				not come to hand.
,,	,,	13	*Mcs.*	10	5	1 10
,,	,,	23	.....	7	4	7 34
,,	March	3	.....	8	0	7 66
	Total		*Mcs.*	26	3	0 38..27 days' produce.
Cuiaba—February	3	}				
,,	,,	16	..... *Mcs.*	2	5	4 1
,,	,,	37				
	Total		*Mcs.*	29	0	4 39

ST. JOHN DEL REY MINES.—*Morro Velho, Feb* 7.—Produce for Jan., 12,949 oits. = 124·399 lbs. Troy—viz., Morro Velho, 12,782; Cata Branca, 176 = 12,949 oits.

The Morro Velho gold is from 3074·4 tons of ore = 4·157 oits. per ton. You will observe, that, in January, the large quantity of 425·6 tons of rejected ores were brought in and stamped—allowance being made for the assumed value of the rejected ores—leaves the value of those received from the mine 4·574 oits. per ton. Very little ore came from any of the sump shafts, which may be assigned as one cause of so good a standard.

Mine Report.—Capt. Treloar herein answers your remarks in letter of 4th Nov., respecting the number of boxes: from paragraphs 3 to 6 you will find some very interesting views taken of the means of working the mines. These must, of course, be taken as approximation and comparatives—but thus establish clearly the most advantageous mode of employing a limited force on an ample field of operations. Capt. Treloar was obliged to abandon his novel mode of viewing the subject, for it was leading to error. The present view, I think, is sound, though it would, I know, be opposed by Mr. Helmsleikaa, and by the mine managers of olden times; and on this subject I will refer you to my diary of the 26th Jan., 1845. The principle now fully developed by Capt. Treloar, I have had to battle for for years in vain, until the arrival of Capt. Verran; but it remained for Capt. Treloar to convince the under captains of the judiciousness of the principle inculcated. Capt. Treloar has inserted a paragraph on the disposition of the mine force, as you requested. There has been a considerable falling off in the quantity of ore supplied by the mine in January—first the rains, and throughout the want of horses, are assigned as the cause. You will perceive, that it has been determined to suspend the East Cachoeira sump shaft altogether, and to establish the sump to the westward. I have no doubt, that ultimately the Bahu sump will have to experience a similar removal some 18 ft. further west, for similar reasons. I regret to report a partial failure in the hauling machine, which you will find explained in my diary of yesterday; the principal cause is in adopting the Cata Branca wheel, because we had it. I wish we had made a new wheel; however, it will, I trust, be arranged so, that it may go to work to-morrow; if it will draw from all the Cachoeira and Gamba shafts, it will, within one month, throw idle 70 whim horses, which are a great drag on the concern. The saving estimated in my diary is only on 57 horses for 10 months.

Cost for January—Rs. 26,984 395 = 3148*l.* 2*s.* 7*d.* Timber stands very moderate for January, 715 rs. In this cost, W. Harrison and Co.'s charges from Rio, 1602 rs., stand at full allowance, and the charges from England are rs. 2018 679. This year will be a very expensive one from England and from Rio, in consequence of the requisitions. I must look to the new hauling machine for meeting this expense; and it is only reasonable, for the chains and wire rope are for the hauling machine, which, in its turn, ought to displace the whim horses.

Feb. 17.—Average number of stamping days, with 71 heads, 16·61; heads working 17 days, 69·37. The supply of ore has been very indifferent. I have a list of reasons from Capt. Treloar—his borers have averaged 16½. The new hauling machine, which works very well, I may mention, in passing, has occupied a great deal of the attention of Capt. Treloar, in arranging the chains, which have been continually breaking, and causing impediments in drawing ore from the East Cachoeira: it will all come right again by-and-bye. The chains of the new hauling machines are still causing a good deal of trouble, but Capt. Treloar says he shall finish by having good chains there at last. In a few days the Gamba ores will be drawn by this machine; there will then remain only Berryman's shaft to prepare for the chains—this is in hand, and, when completed, good bye to all the whim horses—a constantly augmenting draining expense.

Feb. 27.—There is nothing new in the mine. Average number of stamping days, with 71 heads, 26·3; heads working 27 days, 69·12. The supply of ore has somewhat improved since last post, but it is still insufficient for the stamping power; this is not for want of borers, for there have been of late about 190 people boring—the sick list being diminished, and the free men being more regular in attendance. The produce seems to be going on pretty well, as compared with that of last year; but, with an ample supply of ore to pick, it ought to range from 14,000 to 15,000 oits., with the present stamping power.

Gold received by the packet,—317 lbs. 9 ozs. 0 dwts. 22 grs.

WHEAL GRACE.—At a general meeting of adventurers, held at the mine, on Tuesday last, May 4th—John Flamank, Esq., in the chair,—the accounts and vouchers, having been examined and approved, were passed. It appearing, from the account current, and from the liabilities supposed to be incurred, that on the former there is 167*l.* 12*s.* 11*d.* due from the adventurers, and on the latter a considerable sum due on account of the new engine, and other contingencies, a call of 1*l.* 10*s.* per share was made—1*l.* to be paid into the Tavistock Bank on or before Friday, the 28th inst.; and the remaining 10*s.* on or before Friday, the 25th June.—The captain's report having been read, was received and entered on the minutes; and it was resolved, that Rundle's engine-shaft be immediately commenced sinking, with all possible force—say, eight men—and the works generally be carried on with the utmost possible vigour.—The following report, from Capt. John Robins, was read to the meeting:—The following brief sketch may not be uninteresting to those of the adventurers, who may not have seen any former report of this mine—In June, 1845, I was engaged by Mr. J. G. Mitchell to open the ground in this sett, and, after costeaning about 12 fms., we intersected the lode. We then commenced sinking the lower (Mitchell's) shaft, which had not been sunk more than 3 fms. before the lode came into the shaft—it was composed of flookan, interspersed with lead ore. We continued sinking to the depth of 6 fms., when the water became so quick we were obliged to stop; we then went back, and brought up an adit to unwater the same, which adit was of 70 fms. extent—this rendered us every means in sinking this shaft 15 fms.; and in driving a few fms. east and west there were about 30 tons of lead ore risen, dressed, and sent to market on March 14, 1846. This, as it will appear, was done in nine months and two days, without unnecessary exertion or neglecting the general workings of the mine. Since those operations we have sunk the engine (Rundle's) shaft 10 fms. 3 ft., and driven a cross-cut adit 30 fms. to the engine-shaft, which will materially assist us in sinking the same. An engine, account, and material houses, with carpenters' and smiths' shops, have been erected. A 22-in. cylinder double-acting rotative engine has been erected, under the superintendence of Mr. William Matthews, of Tavistock, and will be put to work this day; and I have no doubt the adventurers will be amply repaid for the spirited outlay they have made. At the time we were driving our levels, I was very particular in examining the lode, with its walls and regular bearings, and I could not but decide, in my own judgment, that it was a fair speculation; indeed, after we have developed the lode to the depth of 50 fms., I shall be greatly disappointed if we have not a profitable mine.

DEVONSHIRE GREAT CONSOLIDATED (WHEAL MARIA) COPPER MINING COMPANY.

The annual meeting of adventurers in this company was held at their offices, Barge-yard Chambers, Bucklersbury, on Monday last, the 3d inst.,

Richard S. Gard, Esq., in the chair.

This being the day appointed for the third annual general meeting of the shareholders of the Devonshire Great Consolidated Copper Mining Company, the directors have the pleasure to present to them the balance-sheet of the past year, made up agreeably to the forms required by the Registrar of Joint Stock Companies. Although it is not in the power of the directors to congratulate the shareholders on results equally splendid with those exhibited in their last balance-sheet, yet they have the satisfaction of knowing that this company continues to stand at the head of the list of copper mines in England. Referring to the balance-sheet, which has been duly forwarded to each shareholder, it will be found to comprise a period of 11 months only—viz.: from 1st April, 1846, to 1st March, 1847, which has been adopted so as to comply more effectually with the requirements of the provisions of the deed of settlement. The anticipations expressed last year by the directors, that the necessarily increased expenditure, operating upon the decreased value of the ore (which was reasonably to be expected), have proved too well founded. It will be perceived that, notwithstanding the mines have yielded a larger quantity of ore, the amount realised has fallen short of that of the previous year, whilst the cost of production has been considerably increased. Included in the cost, there has been a considerable amount of expenditure in buildings, the making of roads and other surface operations, which are permanent. Another point must not be overlooked, that with a divided profit of 25,600*l.*, the property of the company, has been increased to the extent of 9000*l.* by the steam-engine at Wheal Maria, and other machinery and materials, as mentioned in the balance-sheet. Taking this correct view of the affairs of the company, the directors feel they have just cause for congratulating the shareholders on the possession of an unusually valuable property. It has been the particular concern of the directors, to endeavour to keep down the enormous expenditure; but, notwithstanding an advantageous contract has been entered into for the carriage of ore, and a considerable reduction in the cost of timber effected, they have found it impossible to reduce to any great extent the monthly cost-sheet, without interfering with the progressive development of the great lode, upon which the operations are being carried on, and which, so far has they have been prosecuted, give the most flattering expectation of the best results. It will not be denied that considerable disappointment has been experienced in the diminished production from the lower levels of Wheal Maria; but the directors are assured by your intelligent agent, Mr. J. H. Hitchins, that this is an occurrence which is more or less attendant on all mining operations, and should not cause any apprehensions that a deeper level will not restore the productiveness of this portion of the mines. The reduced rate of commission payable to Mr. J. H. Hitchins upon the divided profits, has left him without an adequate remuneration for his services. It is, therefore, proposed to restore it to the original rate of 6*d.* in the 1*l.*, which he is satisfied will give him a handsome remuneration for the future. Mr. J. H. Hitchins, has prepared his report of the present state, and future prospects of the mines, which will be found to contain details affording every necessary information. All the directors, agreeably to the provision of the deed of settlement, go out of office this day, and beg to offer themselves for re-election. Mr. J. D. Brown, and Mr. Fox, have also consented to retain the appointment of auditors, if re-elected.

The following statement of accounts was presented, the same having been previously furnished the shareholders, in accordance with the provisions of the Joint-Stock Company's Act:—

PART I.

Balance-Sheet, from 1st April, 1846, to 1st March, 1847.

Dr.	RECEIPTS.					
Balance from last account				£	3461	12 6
Sales of copper ores raised, from Feb. to Dec., 1846, both months inclusive, 14,398 tons 9 cwts., realising			£88471	11	9	
Carriage of the above			£6155	6	1	
Deduct amount outstanding 1st March, but since received			1016	13	11—	5138 12 2—83610 3 11
Fees on transfer of shares						0 2 0
Reserved fund			£2560	0	0	
Deduct cost of 2500*l.* Exchequer bills			2553	8	1	
Remaining uninvested				6	11	11
Add interest received on Exchequer bills				44	3	5
Proceeds of sale of 2200*l.* Exchequer bills				2245	0	1— 2295 15 5
Income tax, deducted from dividends paid				746	13	4
Ditto from dues paid				209	13	5— 9566 6 9
Total						£100324 0 7

Cr.	EXPENDITURE.					
Mines cost, from Feb. to Dec., 1846, both months inclusive						£49109 12 5
Dues on ores sold, from Feb. to Dec., 1846, both months inclusive						7189 0 11
Agent's commission on dividends paid						330 0 0
Poor's rate and assessed taxes at Tavistock						703 9 5
Expenses in London:—viz.:						
Discounts			£273	7	4	
Travelling expenses			34	7	6	
Compensation to directors and auditors for one year, to 4th May, 1846			231	10	0	
Office expenses:—Secretary's salary, rent of offices, stationery, postages, printing, solicitor's bill, & incidental exp.			617	18	3—	1157 3 1
Income tax, 18 months, to 10th Oct., 1846						2167 10 0
Cost of two steam-engines, erected at Wheal Maria and Wheal Josiah						2180 0 0
Timber imported for use at the mines						5426 12 10
Advances made for the enlargement of Gawton quay, on the Tamar, appropriated exclusively to the reception of the company's ores, to be repaid by quay dues on the ores						942 4 8
Dividends paid, 25*l.* per share, on 1024 shares						25600 0 0
Reserved fund						2560 0 0
Balance (at bankers, 3045*l.* 18*s.* 7*d.*, and at office, 2*l.* 8*s.* 8*d.*)						3048 7 3
Total						£100324 0 7
Balance brought down						£3048 7 3

PART II.

Balance-Sheet, from 1st April, 1846, to 1st March, 1847.

Dr.	LIABILITIES.			
Cost for January		£3108	2	2
Cost for February, including merchants' bills		4918	11	5
Dues on ores sold and at grass, estimated at		2024	6	3
Income tax on dividends and dues paid		1132	1	10
Due on account of timber imported		5649	7	0
Salaries, rent of offices, &c.		170	0	0
Balance carried down		25544	9	2
Total		£44546	18	10

Cr.	ASSETS.	*Value according to last Estimate.*	
Copper ores raised in Jan., and sold 18th Feb., including carriage		£9757	1 11
Copper ores raised in Feb., and sold 18th March, including carriage		8866	15 7
Copper ores at grass, valued at		2000	0 0
Steam-engines, bobs, rods, &c., complete, at Wheal Maria and Wh. Josiah		2700	0 0
Pumps and pitwork at Wheals Maria, Fanny, Anna Maria, and Josiah		1500	0 0
Machinery—Drawing-machine and crusher-engines, complete; capstan and shears, complete; tramroads and waggons, roses, jigging hutches, and dressing tools; sheds on dressing-floors; miners' and smiths' tools; tackles, scales, and weights, &c.		2970	0 0
Timber in stock		7347	0 0
Iron, nails, steel, powder, coals, &c., in stock		1115	0 0
Horses, harness, waggons, &c.		360	0 0
Counting-house furniture at the mines		200	0 0
Ditto in London		70	0 0
Exchequer bills in hand, 2800*l.*, market value		2833	15 6
Amount due for carriage of ores to 31st Dec., 1846		1016	13 11
Advances for Gawton-quay		842	4 8
Balance per Part I.		3048	7 3
Total		£44846	18 10
Balance brought down		£25544	9 2

Examined— (Signed) RICHD. S. GARD, THOS. MORRIS, W. A. THOMAS, } Directors.

PART III.

Auditors' Report.

We, the undersigned, having examined the balance-sheet, Part I., from the 1st April, 1846, to the 1st March, 1847, and compared the vouchers with the payments, find the same to be correct. We also find that the balance of 3045*l.* 18*s.* 7*d.* in the hands of the bankers agrees with the Pass-book; and Exchequer bills, amounting to 2800*l.*, as specified in balance-sheet, Part II., have been exhibited to us.

(Signed) CHAS. FOX, J. DEANE BROWNE, } Auditors.

Mine Agent's Report.

Devon Great Consols, April 30.—For your annual general meeting of the 3d proximo, the duty again devolves on us of furnishing you with such particulars as shall have sufficient reference to, and it is hoped will be found to be an intelligible and ample exposition of, the scale of the past and present progress, as also the present state and prospects of these concerns. As on the last similar occasion, there will be embodied in the present report the various necessary statistical statements, with their respective results, for presenting, in the most direct and conclusive manner possible, the first intimated interesting information, which will constitute (what may be properly termed) the respective part of our subject. In such a concentrated form will be at once, and best, seen the nature, scale, progress, and results of the carrying out of the operations of the underground operative departments generally for the past 12 months. To adequately estimate, however, the nature, scale, and objects of the other numerous, great, and important surface works, and, in fact, the general scheme of the carrying out of the company's different concerns, and the very large outlay consequent thereon, will necessarily involve much of additional explanatory remark. In the treatment of such matter, however, as much conciseness as possible will be endeavoured to be kept in view, to prevent unnecessary tediousness, as in respect of the consideration and proper comprehension thereof. And here we cannot refrain premising, that such important results as those to be shown in the statistical tabular statements to be submitted, with the other surface great works generally, involving, as just intimated, additional explanatory remark, will not only show that such great works have been accomplished with considerable dispatch, but also, we think, be at once admitted as evidence of something like a proper degree of spirit, application, and judgment, on the part of the company's agents. In the results of the accompanying statistical statements, will be shown such leading particulars, as the number of fathoms driven and explored in the carrying out of the underground operative departments, as also shafts and winzes sunk, average cost per fm., average number of men employed on tutwork and tribute, same being offered as important proof of fair relative scale of tutwork explorations for new discoveries and increased resources, and showing that no un-

due or premature falling away has been allowed of the ore-ground laid open in the regularly progressive working and development of the company's concerns; and, moreover, amongst the other results referred to will be shown, the average rate of monthly earnings by the operatives in these respective departments, which, as before intimated, will constitute the retrospective portion of the report. Such results, moreover, must, upon very little of consideration, be seen to be, not only in connection with, but in fact as bearing directly upon, considerations and inquiries involving admissions or denials, as in respect of the general working of the company's concerns, having been carried out, or not, in a judiciously effective and economical manner. Notwithstanding, however, that such restrospective results will, upon their own ground, probably be thought sufficiently interesting and important, for the reason just assigned; yet they will not, it is to be presumed, prove at all equal in such respects to the other great results to be arrived at, and presented in the more subsequent part of this document, and by which will be fixed the amount in produce and value of the stock of ore-ground available in the company's different concerns for future samplings. Next in the intended order and routine of our remarks and observations, and of very great importance, will be brought under consideration the present state, progress, and prospects of the company's different concerns, which will not admit of being treated and disposed of, except in a somewhat particular and elaborate manner, to ensure such correct and comprehensive views being realised on the part of the proprietary, as in respect thereof, as is most earnestly to be desired; and that, too, for the most directly apparent and cogent reason, that upon the results of the energetic and progressive trials and developments, now in course of being made, and to be maintained (in addition to the already laid open stock of ore-ground), the permanent and long enduring prosperity of the company must undoubtedly depend.

After the disposal of this part of the report, there will, in conclusion, most probably be seen to be required some attention for other considerations of general tendency, which, although not directly arising out of matters of importance, commensurate with those previously considered and treated on, may, nevertheless, be susceptible upon inquiry and application of suggestions calculated for adding to the advantage of the company. With the few foregoing imperfect, although somewhat necessary, prefatory remarks, the merits of the matters before us will be entered upon, and, as intimated, those of a retrospective bearing commenced with. The statistical statement, here immediately following, will be seen to exhibit the promised results, as in respect of fathoms driven and explored in the carrying out of the company's different concerns for the past 12 months:—Drivages and explorations, as alluded to in report—Wheal Maria, 201 fms. 5 ft. 1 in.—862l. 4s. 5d.; Wheal Fanny, 245 fms. 3 ft. 9 in.—1231l. 0s. 9d.; Wheal Josiah, 438 fms. 0 ft. 2 in.—1654l. 16s. 2d.—total, 885 fms. 3 ft.—3738l. 1s. 4d.: average price per fm., 4l. 4s. 6d.

Upon consideration of the results of the statistical statement just presented, a few words only will suffice for impressing their importance. Such results show that 885 fms. of drivages and explorations have been accomplished in the carrying out of the company's different concerns within the past 12 months, at an average cost of 4l. 4s. 5d. per fm.; and it will appear, by comparing these results with those for the year preceding, that 365 fms. more have now for the 12 months been accomplished in this important department, than during the 12 months preceding. The greater average price per fm. paid for such past 12 months' drivages is attributable to the fact of much more ground having been explored in Wheals Josiah and Fanny than before, and the which has proved somewhat harder, and, consequently, more expensive. Taking these results and circumstances, however, as they stand, it is thought they go far to prove that there has been much spirit and energy prevailing in the pushing forward and accomplishment of such a large amount of tutwork. In the next results to be presented will be shown what has been the amount of accomplishment in the sinking of shafts, and completion of winzes, &c. Shafts, as alluded to in the report, showing a total of 106 fms. 1 ft. 3 in.—1509l. 11s. 8d.: average price per fm., 14l. 14s. 2d. Winzes, &c., as alluded to in the report, showing a total of 106 fms. 4 ft. 9 in.—656l. 13s. 5d.: average price per fm., 6l. 3s. It will be here proper to observe, as in regard to such results, that as they directly refer and explain as to the deepest points reached in the carrying out of the trials of the company's different concerns, they cannot fail to be deemed important. The results of the statistical statements just presented, show that, within the past 12 months, 106 fms. have been accomplished in the sinking of shafts (the whole of which are main sump shafts, excepting the western Wheal Fanny footway shaft), at an average cost of 14l. 4s. 2d. per fm.; as also that 106 fms. have been accomplished within the same period in the sinking, rising, and completion of winzes, &c., at an average cost of 6l. 3s. per fm. The increased cost shown to have been incurred in the sinking and completion of these various engine-shafts and winzes, compared with the cost of same, to the comparatively inconsiderable depths to which they had been sunk, up to the end of the preceding 12 months, is attributable to the various circumstances that will always be, more or less, attendant upon getting down sump shafts to increased depths; and although there has been experienced but an average amount of irregularities, interruptions, and suspensions in the course of the progress and accomplishment of such operations, such being the natural contingencies of machinery and pitwork; yet the increased rate of remuneration for men's labour, referred to, has been unavoidable, and to the same circumstances is attributable the decreased amount of work that has been accomplished in the sinking of these several engine-shafts within the past 12 months, compared with what was before accomplished in the same important departments for the previously occurring 12 months. The next results to be presented, and here immediately following, will show the amount of labour force employed underground in the carrying out of the respective departments of tutwork and tribute; and will, it is hoped, not only be deemed satisfactory proof of the efficient working of the company's different concerns—but also show, it is thought, that the force employed in these two important departments has been in accordance with a fairly relative and proportionate scale—that is to say, in other words, the company's tutwork operations for regularly effective trials, developements, and discoveries of increased resources, have been unremittingly persevered in; and, moreover, the ore-ground discovered and laid open has not been prematurely brought into operation for any disproportionately larger returns than such, the legitimate circumstances of the case, have been thought to justify:—Average monthly number—tutwork 135 men; tribute, 85 men. The results before us, in the statement just presented, show, that a force of 123 men in the department of tutwork, and 85 in that of tribute, has been the average monthly force employed during the past 12 months, which, it is thought, should be received in evidence of the fact, that the carrying out of these important departments has been on a sufficiently vigorous and effective scale. The next results will show the average monthly earnings of these underground operatives for the past 12 months in such departments, and will render necessary but little of remark in aid of their own conclusion:—Average getting, during 12 months, ending March, 1847—tutworkmen, 3l. 2s. 7d.; tributers, 4l. 15s. 3d.

The results of the statements just presented, show that the average monthly amount of earnings of the men for the past 12 months, on tutwork and tribute, has been 3l. 2s. 7d. for the former, and 4l. 15s. 3d. for the latter; and may, it is thought, be very fairly offered to establish the fact, that there has been a proper degree of judicious economy kept in view by the company's local agents, in the control of these important departments of the general expenditure. It will, indeed, prove highly satisfactory, if in the foregoing retrospective particulars it be thought that enough has been brought forward to admit of sufficiently correct general views on the part of the adventurers, as to the extent, nature, efficiency, and economy of the past 12 months' underground operations. Before bringing such retrospective particulars to a close, however, there will be submitted, as was intimated in the introductory part of this document, an abstract of the gross returns realised during the past 12 months' working, which cannot but appear as strong additional evidence of the fact of such working having been carried out with vigorous effect.

Statement of Accounts (carriage included) for the past Twelve Months to end of April, 1847.

When Sold.	Copper Ores. Tons. Cwts. Qrs.	Amount of Carriage. £ s. d.	Total Amount. £ s. d.
Ores sold, May 21, 1846	1645 4 2	703 6 9	10,997 6 1
„ June 18	1713 13 2	732 11 6	11,910 19 10
„ July 23	1283 3 0	548 10 11	7268 5 6
„ August 20	1815 7 2	776 1 0	10,293 19 8
„ September 17	882 7 2	377 4 0	6316 11 11
„ October 22	1138 9 2	486 13 10	7931 19 2
„ November 19	1213 19 2	518 19 2	7993 12 7
„ December 17	1077 4 0	460 9 11	6884 5 8
„ January 21, 1847	1195 16 2	511 3 11	7820 1 4
„ February 15	1419 15 0	606 18 7	9757 1 11
„ March 18	1288 13 2	550 17 9	8866 15 7
„ April 22	1036 0 0	442 17 10	7853 7 10
Computed 21 cwts.	15,709 2 0	6715 15 2	103,899 7 1

The abstract just presented requires only a single glance to carry immediate conviction of the great importance of its results. Suffice it to say, that the company's returns in ore and value, are shown to have been at an average rate of 1309 tons 2 cwts. 2 qrs. and value 865l. 5s. 7d. monthly for the past 12 months. Having, in the various foregoing statements, results, and accompanying remarks and observations disposed of (and it is hoped in a sufficiently particular and intelligible manner) the promised retrospective particulars, as in reference to, and explanatory of, the general nature, scale, and effect of the company's different underground workings, it will be our next duty (in the order and routine of this report) to bring under consideration and review, in a sufficiently correct way for general reference, what has been doing and accomplished during the past 12 months in the carrying out of the company's numerous, exceedingly heavy, and important surface works, and with a view, as already intimated, to enable the company to adequately understand and estimate the nature, scale, and objects thereof; and here, before referring more particularly to such matters, we cannot refrain from saying, that, although the company's outlay in consequence has been, most undoubtedly, exceedingly great, the erection and completion of the requisite steam-engines, and auxiliary surface machinery in connection therewith, workshops, and premises, and the execution and carrying out of the whole of the company's surface works and arrangements generally, will be admitted, upon the most scrutinising examination thereof, to have been accomplished in such a manner, and on such a scale, as will admit of the future working of the company's different concerns in the most full, effective, and advantageous way, that present known mining means and appliances may be in any way susceptible of.

Our remarks, in respect of such matters, will first apply to Wheal Maria. At the time of the last annual general meeting, on reference to the report submitted on that occasion, it will be seen that the 40-in. cylinder steam-engine now, and for a considerable time past, in regular course of working at Morris's engine-shaft, and keeping effectually under control the underground water throughout the whole run of the extensive and becoming deep workings of this concern, was not then erected. Upon the new really full experience that we have had for testing the soundness, regularity, and correctness of working, and capability of this engine, we are enabled to state, in the most unqualified terms, that it has, in all such respects, fully realised the expectations that we had been led to entertain in respect thereof, upon the ground of the representations of the company's engineer. Besides these, have been accomplished all the various necessary connections, surface bobs, rods, &c., for carrying the power of this engine to various points of application—viz.: Gard's engine-shaft, and the two engine-shafts at Wheal Fanny—at which points it pumps, and effectually keeps the whole of the underground water in work, in addition to its equally satisfactory performance of similar duties at Morris's engine-shaft. It is also to be stated, that both the lines of surface rods from the engine in question, to the two Wheal Fanny engine-shafts, are upwards of 100 fms. long each, and in the same way the required engine-power for Gard's engine-shaft pumping purposes has been applied by another line of rods of about 60 fms. in length, by which it cannot but be understood that various and exceedingly important labours and objects are performed with such engine and machinery connections. To the carrying out of these heavy and expensive erections of engine, surface machinery connections, and all the other unnoticed arrangements involved, must be mentioned the fact, that increased deep working and quicker water rendered necessary almost the entire removal of the first old and inadequate underground rods, pumps, and pitwork and machinery generally, in the place of which there has been substituted new, now, and for a long time past, found in all respects to fully answer all requirements. It is also further to be remarked, in continuation of same subject, that similar requirements, as in respect of the underground pitwork machinery generally, in Morris's engine-shaft, involved the same alterations and measures, to render that important medium so fully and efficient as one as it ought to be, and we are enabled to say, now is, for all its intended objects. The powerful 40-foot water-wheel grinder alluded to in the report of the last annual general meeting, as being then in course of erection, has been long since completed and available, and been found also to answer extremely well, in proof of which it will be necessary only to state the fact, that it has been made, on several occasions requiring dispatch, to grind at the rate of upwards of 10 tons of ore an hour. Moreover, in connection with this important machine, there has been made a suitable pad, in fact, exceedingly extensive, ore-floor, capable of holding (for turning and weighing) more than 500 tons, which has been excavated in the side of the hill, at the southern adjoining end of the dressing-floors, and made good in the most complete manner, with the largest obtainable flooring-stone. And, further, in connection therewith, there has been built required house for secure keeping of weighing machines and other requisite tools and materials for carrying out the labours of this department—the whole scheme of which, upon inspection by numerous parties of practical judgment in such matters, has been pronounced to have been carried out in an exceedingly suitable manner, and upon no other than such an adequate scale as the magnitude of the operations and results of the concern justified. There has also been erected a large and powerful water-wheel, of 40-ft. diameter, which is now within a week or so of its entire completion—situation thereof being at a point about 60 fms. down the hill, west from Gard's engine-shaft. This machine is intended to haul the whole of the ore and stuff from Gard's and Morris's shafts—and for which important objects it will not only be fully equal, but also will, in addition, possess adequate power for pumping and effectually keeping the water in fork at Gard's, at present deepest points reached, as is intended at no distant period, in manner and under circumstances, probably to be referred to in the afterpart of this report, with other remarks of a general tendency.

This machine, it is to be hoped, will certainly be at work by the time above alluded to—the necessary stands and pulleys therefrom to the two points of hawling—namely: Gard's and Morris's—for taking the connecting chain, being in almost a ready state for application. It is hardly necessary to observe, that by the adoption of such a new medium of mechanical hauling power, the present heavy expense, attendant on horse-whim hauling, amounting to upwards of 50l. per month, will be almost altogether done away with. In conclusion of these promised references to the surface works, and performances of the company, as relating to Wheal Maria, it is only intended to be stated, that another additional main road has been cut, made good, and most effectually available, as the readiest inlet and outlet to and from, not only the concern, now more particularly under consideration—Wheal Maria—but also Wheals Fanny and Josiah; thereby ensuring the cheapest possible bringing of required supplies of materials, and the transit of the ores, from those concerns to the several quays on the Tamar—namely: Morwellham and Gawton—for the sampling and shipment thereof. So has it been at Wheals Fanny, Anna Maria, and Josiah, although in a very much less degree, that similar, but smaller, requirements have involved considerable outlay. At Wheal Fanny, however, there has been no great additional extra surface work and outlay going on, beyond the construction of embankments, and carrying of same across the valley, for formation of such extensive reservoirs (which we now have) for the important objects of keeping back, and economising the surface water; for application of such power to its fullest extent for the more important operations of grinding and dressing; and for all the other more subordinate purposes. The last accomplished embankment, and, consequently, raised reservoir, of the kind alluded to, is intended for the carrying of its water-power over a powerful water-wheel hauling-machine, by which the whole of the ore and stuff from the underground workings of this, to be lasting and profitable, concern, will be brought to surface with equal advantage, and in same manner as is promised to be accomplished by the Wheal Maria—similar hawling-machine now about so shortly to become available. The water-wheel hauling-machine here referred to, as being intended and calculated for the great advantage of this concern (Wheal Fanny), will now forthwith be actively getting on with; and it is to be hoped that it will not be many months before the advantageous results of its working will be realised. At Wheal Anna Maria, the surface machinery, erections, works, and other arrangements, in consequence of the active prosecution and inducements of the underground explorations, have been carried out with considerable spirit and dispatch. The chief surface works, however, accomplished, have been the erection of line of surface rods, of about 170 fms. from the engine-shaft of this concern to the steam-engine at Wheal Josiah, by which the water has been effectually kept in fork in this concern (Wheal Anna Maria), to admit of its prosecution with the utmost effect that time and money would admit. In addition to such works, there has been also, and is now, in actual course of being made, required, suitable, and adequately comprehensive dressing-floors, with a view to the dressing, and making fit for market, the ores to be raised from both these concerns of Wheals Anna Maria and Josiah—such position for dressing operations being most desirable; in fact, fixed, upon the ground of necessity, owing to the absence of water for contemplated purpose at Wheal Josiah. At Wheal Josiah, we are happy to say, there have not been required any sufficiently costly additional surface works since the period of the last annual general meeting, at which time, as on reference to the report submitted on that occasion, the erection of the present steam-engine, counting-house, suitable workshops, and other necessary premises, as all other surface arrangements generally, had been accomplished. Of course, it will be in other and subsequent portions of this document that we shall have the pleasure of referring to the company's spirited, persevering, and successful efforts in the carrying out of the prosecution of this most promising concern. Having disposed of the few foregoing imperfect particulars, so framed as to constitute a sort of general exposition of the nature and scale of some of the company's various and most important surface accomplishments, there will be other matters to be brought forward for consideration, and, as will be presently shown, well calculated to excite and keep up considerable interest. Before doing so, however, we cannot but be allowed, for a moment or so, to look back at the various statements and results, and all the accompanying and naturally-suggested remarks which have been submitted, as meaning to bear upon, and explain sufficiently, both as to the surface and underground accomplishments of the company during the past 12 months, as also allowed to hope—however much it may be done in error—that such retrospective matter will be thought to have been presented as free from superfluous weight and indistinctness of detail, and in such clear, correct, and conclusive terms, as ought to be expected from the comparatively inadequate abilities only that we have been able to bring to bear for our satisfactory acquittal as in respect of such matters. In accordance with intimated order, and routine of this report, it will have to deal with matter more directly attractive, and certainly involving very considerable importance—in a word, it is to the company's stock of ore ground discovered, laid open, and in course of further and increased active development in the company's different concerns for increased resources, returns, and permanently profitable results; and certainly, upon proper reflection, there must be admitted to be good ground for the great interest and importance which such matters of mining reports are always sure, in a greater or less degree, to excite and carry along with them; for rigidly considered, the actually discovered, laid open, and well ascertained, stock, of ore ground in a mine, is the only ground fixed and determined, upon which to calculate with anything like positive certainty as to realisations. In proceeding with intended estimates for arriving at capabilities of the company's stock of ore ground, the deepest levels and points of operation ascending, until the shallowest shall have been reached, and brought under valuation, as in respect of the ore capable of being obtained therefrom,—the particulars here immediately following, for fixing proposed results, are to be received as having been arrived at in a sufficiently careful and correct manner.

From the following abstract, it will be seen, that the company's available stock of ore ground is considerable—showing it to be equal in gross produce to 203,839*l*.

Abstract of company's available ore ground, as referred to, and fully particularised in the report:—

Wheal Maria.—Ore ground, back of 23, east and west of Gard's engine-shaft, 5760*l*.; ore ground, between 28 and 23, at Gard's engine-shaft, 4800*l*.; ore ground, back of 28, west of Gard's engine-shaft, 4798*l*.; ore ground, back of 28, west of Gard's engine-shaft, 2350*l*.; ore ground, between 40 and 28, at Gard's engine-shaft, 10,080*l*.; ore ground, back of 40, west of Gard's engine-shaft, 5850*l*.; ore ground, back of 40, east of Gard's engine-shaft, 30,200*l*.; ore ground, between 40 and 53, east of Gard's engine-shaft, 5005*l*.; ore ground, between 40 and 23, east of Gard's engine-shaft, 1800*l*.; ore ground, back of 50, east and west of Gard's engine-shaft, 7700*l*.—87,233*l*.

Wheal Fanny.—Ore ground, back of 18, east and west of eastern engine-shaft, 5880*l*.; ore ground, back of 25, east of eastern engine-shaft, 8526*l*.; ore ground, back of 25, west of eastern engine-shaft, 7440*l*.; ore ground, back of 15, west of eastern engine-shaft, 1104*l*.; ore ground, under 25, east and west of eastern engine-shaft, 26,136*l*.—49,086.

Wheal Josiah.—Ore ground, back of 50, east of Hitchins's engine-shaft, 12,600*l*.; ore ground, back of 50, west of Hitchins's engine-shaft, 3640*l*.; ore ground, back of 50, east of Richards's engine-shaft, 6120*l*.; ore ground, back of 50, west of Richards's engine-shaft, 360*l*.; ore ground (computed), below 50 east, west of Hitchins's and Richards's engine-shaft, 44,800*l*.—67,520*l*.—Total available stock of ore ground, 203,839*l*.

It will be required of us, however, before taking leave of such estimates and abstract, to say a few words in explanation of the great discrepancy appearing upon the face of them, on comparison of their results with those of similar estimates and abstract embodied in the report submitted on the occasion of the last general meeting of the company. It is necessary to observe, that at that time the 40 fm. level in Wheal Maria had been extended about 22 fms. only, east and west of Gard's engine-shaft, as will be corroborated, on reference to the tabular statement of drivages then submitted. So far as this level had then extended, both east and west of Gard's engine-shaft, and, in fact, home to the first main cross-course, 32 fms. east, the then estimated capabilities of the ore ground laid open thereby, have been since fully realised upon the unerring test of actual working. It is to be regretted, however, that the 27 fms of ground then at that time to be driven through in the 40 east, on to Morris's cross-course, from its then furthest point of progress (22 fms. east from Gard's), should have been brought into the estimates of the company's available stock of ore ground at an equal rate of capability and value as the 22 fms. of ore ground which had been then gone through, and realised in that level. Notwithstanding the following facts—viz.: the ore ground in the next level above (the 28) having been gone through, and proved for the entire extent of 60 fms. from Gard's engine-shaft to Morris's cross-course, and also same ore ground having been shown, by a winze sunk a little below that level, to be holding down, and, moreover, the ore ground having held good in the 40 fm. level for 22 fms. east from Gard's engine-shaft—it was thought quite sure that the assumed rate of capabilities and value of the remaining ground at the 40 fm. level, from the point it had then reached to Morris's cross-course, would have been more than realised; but such, however, we regret to say, is far from being the fact. Suffice it to say, that the ground referred to in the 40 fm. level, to the east beyond the first main cross-course, and to west of Gard's engine-shaft, beyond the then furthest points of that drivage, cannot be said to have proved worth more on an average than 30*l*. per fm., but for which the present company's available stock of ore ground would have been much higher.

Having referred to such matters, which could not but be felt to be due to the company, the more pleasurable duties devolve on us, of bringing under consideration the appearances as now presented in, and throughout, the underground workings of the company's different concerns. At same time will be considered prospectively what are the probabilities, not only of the continuance of past and present success, but also of realisation of greater resources for future increased success. In a word, it is now intended to bring under consideration the present state and prospects of the company's different concerns, which will be in the proper order and routine of this report. Before entering into the various considerations that will be embraced within the limits of this interesting, and, as before intimated, important subject, it has been all along seen, that the various facts presented in the statements having reference to the company's past 12 months' operations and estimates, showing capabilities and value of the company's stock of ore ground, would not only have a tendency to reduce our intended remarks into so narrow a compass as the nature of the subject, consistently with the required proper effect to be given to it, will admit of; but also to greatly facilitate the rendering of proposed information in a less, although sufficiently comprehensive, clear, and intelligible, form.

In pursuing the various particulars involved in the subject before us, the deepest points of operation and development will be first brought under consideration, and then the upper, until the whole of the underground workings of sufficient importance, worthy of remark, in, and throughout, the company's different concerns, shall have been reported on. We have, therefore, in this way to apply our remarks and observations to the state and prospects of Wheal Maria—the deepest point of operation yet reached in that concern being Gard's engine-shaft, which is now down to the 60 fm. level, and in course of being cased, divided, and having footway put in, preparatory to commencing required cross-cut south, for intersection of the lode at such increased depth—the results of which cannot but be looked forward to with more than ordinary degree of interest, for reasons of which the adventurers being fully cognizant, needs not here again be gone into. Suffice it to say, in reference to this important point, that, although in respect of the results of the lode in the explorations, up to the present time carried out in the next level above (the 50), there has been, and still exists, much reason for great disappointment; yet, from continued large size, and sufficiently kindly general character of the lode and ground in places about it (notwithstanding the unproductiveness for the most part of this intermediate 50 fm. level, which, after all, is only one of the great number of similar cases in mining), we are not without considerable expectation in looking forward to the 60 fm. level results, of which we shall be aware on the getting in of the now about to be commenced 60 cross-cut to the lode, in about two months from this, or may be in a little more, or less, time, as will depend, of course, somewhat on the nature of the ground, that such cross-cut (7 or 8 fms.) will have to be driven through. The next deepest sufficiently important point of operation in this concern is Morris's engine-shaft, which is down to the 50, where there is also cross-cutting going on for the intersection of the lode, the object of which is to admit of the driving back west, on the course of the lode, for the effectual trial and development thereof at such unexplored levels—that is to say, in this part of the mine—and for the accomplishment of dispatch, in effecting desirable, and to be advantageous, communication, with drivage at same level (the 50), coming east of, and now in, from Gard's engine-shaft, in that direction 34 fms. to the first main cross-course in that part of the mine. On the cutting of the lode (as is to be shortly calculated on), in the 50 fm. level cross-cut, just referred to as being now driven towards it, we look forward with a tolerable degree of confidence to the result, which, if only equal to that realised in this part of the concern, immediately over in the next level above (the lode at that point being equal in produce to about 30*l*. per fm.), will not fail to be appreciated as an important and a valuable improvement and acquisition. The 50 fm. level east is next to be considered. This level has already been alluded to amongst preceding remarks, as having been driven east to the first main cross-course 34 fms. from Gard's engine-shaft, at which point it is driving south, for the intersection of the lode. It cannot but be regretted, that we have no other alternative than to say, that in respect of the results of these (50 east) explorations, we have had, up to the present time, to submit to much disappointment, the lode throughout (with the trifling, but yet cheering, exceptions of rich stones and spaats of ore met with here and there in places, irregularly deposited in the lode,) having unproductive. As just alluded to, however, we are now driving at the farthest point of progress in this level south, and to the east of the first main cross-course, for intersection of the lode; and where, let us hope, there are better results in store for the company. In further reference to this important part of the concern, it is to be observed, that there is here yet to drive east about 30 fms. home to Morris's cross-course, which is the extent in this direction of the ore ground in this concern, as proved in the levels above. We cannot close our remarks, bearing on the state and prospects of this, these important 50 fm. level trials, without referring to the cheering fact of the lode in the next level above (the 40), for the whole of the extent between the first main cross-course, east from Gard's (where our 50 now is), home to Morris's cross-course, being, on an average, equal in produce to upwards of 5 tons per fm., worth 6*l*. 10s. per ton, as will be seen to be one the features of the estimates of the company's available stock of ore ground in this concern. Surely, then, this may be viewed as favourable promise of improvement, and, in fact, of profitable returns, on the cutting and laying open the same run of ground in the 50 fm. level below, with a view to which the cross-cut south (already explained) is now in most active course of progress and accomplishment. In the 50 fm. level drivage, west from Gard's engine-shaft, and now something more than 20 fms. in that direction we have also had, although in a less degree, to submit to disappointed expectations, as in respect of the comparatively speaking unprofitable results only that have attended its progress, for the most part, throughout from its commencement, from cross-cut at Gard's, to within a few fathoms of the present end, where, however, we are happy to be enabled to report, the lode shows great improvement, which it has pretty well maintained home to, and is still maintaining on, the present end, being worth, on an average, for the extent alluded to, about 20*l*. per fm.

In a more directly intelligible way for explaining the amount of disappointment, experienced in consequence of non-realization of better 50 fm. level results, the fact appearing in the estimates of the company's available stock of ore ground—namely: that the ore, so far as same has been ascertained upon proof by working in places between these 30 and 40 fm. levels above, is not to be calculated in respect of its capability of returns at very little more than 7000*l*.; although, as we have already shown, amongst other foregoing particulars, that these 50 fm. level explorations have been extended to the east and west of Gard's engine-shaft for upwards of 54 fms.—that is to say, 34 fms. in the former direction, and 20 in the latter. Our next references to such matters will be as in respect of the 28 fm. level, which is in operation west from Gard's engine-shaft, on the south lode, where, at the furthest point of the progress of such drivage, there has been for some time past, and still, continues, a good lode, worth, on an average, about 25*l*. per fm.; and the which is the same south part of the lode that has been, for a considerable time past, and is still worked, proved, and turning out very well elsewhere, at different points and levels in this part of the mine (in addition to the 28, here more immediately referred to), at the 40 fm. level, and in the rise now in operation in the back thereof, and 50 fm. level, western end, by which testing it is rendered certain that this western run of ore ground, on the south lode, will admit of exceedingly good auxiliary supplies, for a considerable time to come, towards the company's future samplings. The capabilities of such points, however, altogether or separately, have been already shown in the detailed estimates of the company's available stock of ore ground; and there need be now no hesitation, upon additional consideration, in saying that the ground in question will realize, not only to the full, but more than promised results. In the rise, in the back of the 40 fm. level, west of Gard's engine-shaft, in this run of ore-ground, and, in fact, on same south lode, as just now made in the way of collateral allusion to appear, the lode is still holding a tolerably good course of ore, worth about 20*l* per fm., and has proved more than equally productive all the way from commencement of rise, in the back of the 40, for 6 fms., up where such rise now is, and in fully active progress, with a view to desirable communication with the level above (the 28), for most advantageous—in fact, best possible—working of the resources already alluded to as being in this part of the concern. There is nothing to bring forward as in respect of the state and prospects of the 40 fm. levels, east or west, both of which are dormant. It is, however, necessary to observe, with respect to the discontinuance of the 40 west, that it is only temporarily suspended; the 40 fm. level east is home to Morris's great cross-course, as is also the case with all the other upper levels in this direction, by which cross-course this extraordinary lode is thrown south, as is well known, something like 100 fms. on to Wheal Fanny, where it is now being worked, as only advantageously practicable, by distinct machinery, means, and appliances. For such reasons, it is that the 40, and the whole of the upper levels in this part of the concern, are, and have been, for 12 months past, dormant. We have, however, the satisfaction to state, that the ore ground of these eastern levels, now so long since laid open, and for such a length of time past in most vigorous and profitable operations on tribute, is turning out abundant supplies of fair average quality ore; and it will be clearly seen, on reference to the estimates of company's stock of ore, that at these different levels there are, indeed, very considerable resources remaining.

The most important active points of this concern (Wheal Maria), having been, it is thought, sufficiently referred to in the foregoing remarks and observations, attention will be next directed to similar considerations as in respect of Wheal Fanny. The eastern engine-shaft in this concern, being the deepest point reached, will be first referred to—this shaft is now being sunk below the 25 fm. level with all possible energy, for getting down to another deeper level, which will be the 35, and the which will be driven with the utmost dispatch east and west, to come in under the 25 fm. level drivages above, in which have been realised and laid open fine runs of rich ore ground, and for a considerable length, as will be shortly referred to, and, in fact, has already been shown in the estimate of the company's available stock of ore ground. It is with pleasure that we are enabled to state, that there is now in the bottom of this shaft an equally productive lode as above, met with in sinking anywhere from surface—suffice it to say, that the lode in the present bottom of the shaft shows a fine course of ore, worth at least 60*l*. per fm. In the 25 fm. level, east of this eastern engine-shaft, which is now driving with all possible force, and has been for a long time, and, moreover, for most of the time, through rich ore ground; the lode, although not at present so productive as some fms. back, is, nevertheless, in the present end, worth 30*l*. per fm. Suffice it to say, that amongst the estimates of the company's stock of ore-ground, it will be seen the ore ground which this level (the 25 east of eastern engine-shaft) has laid open and rendered available, is capable of pretty considerable returns, considering that it has only as yet been driven for a distance of about 24 fms. The ore ground laid open in this 25 fm. level, east of the eastern engine-shaft, for the the length mentioned (24 fms.), and to be taken at a 9 fms. back, as standing between the 25 and 15 fm. levels, has been shown in the ore estimates to be equal in returns to upwards of 800*l*. It cannot but be admitted, that in looking at such, the available resources laid open at this level, and taking same into account, with the fine course of ore realized for the whole of the way in the sinking of the eastern engine-shaft, sinking below—and, moreover, connecting such developments with the prospective views, which show almost a certainty of equally good development and results from intended levels at increased depths, to take same run of rich ore ground—there appears, indeed, good substantial ground for satisfaction, on contemplation of the state and prospects of this concern. This level, also (the 25), west from the eastern engine-shaft, has been driven in all about 40 fms., 43 of which have been in good productive ground, although in the present end of such drivage, the lode is somewhat disordered and divided. The ore ground (for 42 fms. in length), just referred to as having been gone through in this level, has proved to be equal in produce, on an average, to about 5 tons per fm., worth 6*l*. per ton; and the backs for such length remaining between the drivage in question and the next level above (the 15, of equal productiveness), have been ascertained in an equally careful way, as the other ore ground of the concern, to possess a capability of considerable returns, for assisting the company's future samplings. Calculating the length of such ore ground laid open in this 25 fm. level, west of eastern engine-shaft, and the backs referred to as standing between it and the 15 fm. level above, the returns which such available ground has been set down at in the estimate, showing the company's general stock of ore ground as being capable of—namely, 7440*l*.—will, it is confidently reaffirmed, be more than fully realised. Looking, therefore, at the actual developments and realisations in this part of the concern, at such, comparatively speaking, inadequate depth, and taking same connectedly with prospective views, fairly admissible, of expectations that not only equal but greatly increased results will be realised, as in respect of same run of ore ground at levels of increased depth, it cannot but be admitted, that for such reasons not only the state and prospects of the ground, here more particularly referred to, must be considered highly satisfactory, but also that for the same reasons the concern generally has been considerably enhanced in value. In a word, it is clearly deducible, from the foregoing references to the deepest points of exploration and development in this concern, that it not only presents very flattering appearances, but, in fact, promises good and lasting success to the adventurers, in return for their spirited outlay and perseverance. The shallow levels will now have some attention directed to them in the same way, with a view to their state and prospects. In the 15 fm. level, east of the eastern engine-shaft, which has been driven in that direction very nearly for 30 fms. in all, on the north and south portions of the lode, the developments for some fathoms past have not been satisfactory, but are now again becoming so.

The lode—the north and main part thereof—laid open, and at several points in operation in, and throughout this level from, the eastern engine-shaft, on to within a few fathoms of the present end, shows, for a greater part of the way, a good course of ore, worth 40*l*. per fm.; the value of the lode, however, as now exhibited at the farthest point of the progress of this drivage, although not to be estimated at anything beyond a ton of ore per fathom, is to be considered, in respect of its general character, a strong promising lode. By coupling these good realisations with those of same run of ore ground in the level below—namely: the 25, east of eastern engine-shaft—as also with the proof being practically established of the holding down of such ore ground between the two levels in question—that is to say, the 15 and 25—by a winze, now about 5 fms. below the former, with a view to come down on the latter, at a point where there is also laid open a good course of ore, will appear to be insured permanently considerable and profitable returns from such points of development. In fact, as is shown in the estimates of the general stock of ore ground, this eastern run, as calculated in respect of its extent and its backs, from the 25 to the 15 fm. level, and above, is without doubt already capable of returns, in gross value, more than equal to 10,000*l*. That the company's trials in both the levels just referred to, are extending in productive ground, will not fail to be deemed highly satisfactory. The next points of operation to direct attention to will be those of the western engine-shaft, and explorations east and west thereof. This shaft is distant from, and to the west of, the eastern engine-shaft, between 60 and 70 fms., but in communication therewith by the 15 fm. level, which has been extended west, considerably beyond the western engine-shaft, passing, for the most part, through a very strong gossan in places, accompanied with rich ore. Owing to the fall of the hill, however, in this part of the concern, this 15 fm. level (which is at the eastern engine-shaft, up the side of the hill), has not been much more than (say) about 6 fms. from surface at, and west from, western engine-shaft—so that it has been more with a view to see the bearing, declination, and general character of the lode, that such shallow explorations have been carried out. The developments, however, in, and throughout, for the most part of this drivage, on to its extreme extent west, from the western engine-shaft, are exceedingly fine, as also about the shaft in question, where, both to the east and west, at same level, under the gossan, which does not here hold down so deep, some considerable quantities of excellent quality ore have, from time to time, been returned: the lode besides, in places, and generally throughout the workings being large, and exhibiting strong metallic mineral features. Upon such appearances and facts as these, it is that the western engine-shaft is now sinking below the 25 fm. level with all possible dispatch, for getting down to the regular courses of ore, which the large and strong gossan, for a great extent, in the 15 fm. level, as just be referred to, indicates as being below, and for which it is not only hoped, but expected, there will be no very deep sinking required. From this western engine-shaft, at the 20 fm. level,

we carried a cross-cut into the lode—the north part thereof. Since which, there has been driven on its course, both east and west of the cross-cut, in all about 35 fms.—that is to say, in the former direction, about 23 fms.; and in the latter direction, about 13 fms. We have no yet, however, nothing to report in the way of success, as in respect of such explorations. In the 25 fm. level east, as also west, this north part of the lode has been, for the greater part of such drivings, disordered in itself, and also in disordered and broken ground; in the 35 fm. level, drivage west, at present, however, the lode is large, and wearing an improved appearance, and, at the same time, producing saving work—from what has been seen and experienced, as in respect of the lode in this part of the concern, it is, we think, to be understood, that we have yet to get down into more regularly-settled ground for reaching the courses of ore that our judgment tells us will sooner or later be sure to be realised in the carrying out of this concern. Upon a proper estimate of the particulars submitted, as in reference to the important discoveries already realised in the eastern part of this concern, in the eastern engine-shaft, at the deepest point reached, and those in the 25 fm. level, drivages east and west, now made good for very nearly 70 fms. in length, there cannot, it is thought, but be felt a considerable degree of satisfaction. Also, it is to be again as often before observed, with regard to the western part of the mine at, and west of, the western engine-shaft, that, looking at the ground a-head in this direction, towards the Wheal Maria great cross-course (between the western engine-shaft, and which there is a considerable extent of ground), very satisfactory prospective views and expectations are justifiable—the facts being, that we have laid open the backs of this lode for the whole of the distance, and found it of an average width of 10 ft., composed largely of very fine gossan, resembling that in Wheal Maria, under which that extraordinary run of ore ground has been realised. Looking, therefore, at this concern generally, as in respect of both its eastern and western trials and developments, enough, most certainly, will be admitted to have been shown in proof of the state and prospect of this concern being highly satisfactory, and, therefore, reference will be next made to Wheal Anna Maria, which will involve but comparatively little remark, from the limited way only in which it has been worked as yet.

The company's operations here, which were only commenced about 12 months since, are easily explained. The engine-shaft (by help of connecting surface rods from Wheal Josiah steam-engine) has been sunk, from surface down to take the footwall of the lode at the 30 fm. level, and at which there is now being excavated ground for bob, piat, &c., with a view to deeper sinking, and, as is confidently to be expected, successful results. The company's other explorations on the lode have been at the adit level, which has been coming in expeditiously from the western valley, between this concern and Wheal Fanny, the progress of which has been highly satisfactory, being something over 128 fms. for the past 12 months, having been driven, however, in all since its commencement, upwards of 150 fms. This extensive drivage has been more with a view to ease the underground water, not only in this concern, but also in Wheal Josiah, than under expectations of discovering ore ground. The lode, however, for the most part, throughout these explorations, has proved to be highly promising in its general character, showing pretty much same sort of gossan as elsewhere found in the company's other concerns, in connection with, and being in fact, as is here contended for, the result of the ore below. At the 30 fm. level, east and west, we have been driving only for about four months, the extent in all driven being, up to the present time, about 24 fms.—that is to say, 13½ fms. in the former direction, and 10½ fms. in the latter direction, and the which trials (as also the others just referred to) are in course of most active prosecution. Although, upon such trials, we cannot as yet report any sufficiently good continuous ore ground, for assisting, in any very material way, our returns, or important enough for being brought into the estimates of the company's available general stocks of ore ground—nevertheless, it is to be stated that at different points in these 25 fm. level drivages, the lode has been shown to be large, from 7 to 8 and 10 ft. wide, composed of immense quantities of mundic, mixed with ore. The greatly preponderating proportion of the former, however, has rendered the latter of but little avail, for in the dressing department, upon the adoption of all the plans and processes that the company's agents are acquainted with, the ore stuff raised from this concern (Anna Maria), has failed being made adequately profitable. The remarks just made, in reference to the lode, apply to it sufficiently well, as in respect of its general character in both the 25 fm. level drivages, east and west—although the latter level, it is, at all events, cheering to have to state, is now showing the lode as containing ore enough to be worth from 25*l.* to 30*l.* per fm. It is right to state, however, that such has been before, and more than once, the case in the course of these workings; and we are led to believe that the ore we have been trying for, and feel so confident of realising, will be found, for the most part, below the extraordinary run of mundic that we have met with in this concern, and which will not be at variance with the old saying —" mundic rides a good horse !" Having referred sufficiently to the matters of chief bearing on the state and prospects of this concern, attention will be next directed to considerations similarly applicable to Wheal Josiah. Before entering into intended particulars relating to the state present and prospective of this important concern, it will facilitate our endeavours in this way to give a sort of abstract of the nature, extent, and depth of the company's explorations. There are two main, and fast becoming deep, engine-shafts in this concern, the distance between them being very nearly 70 fms.—Hitchina's engine-shaft being the eastern one, and Richards's engine-shaft being the western one. Hitchins's engine-shaft is down to the 50 fm. level, and Richards's engine-shaft several fathoms below. The 50 fm. level is driving east of first-mentioned shaft, as also the 50 fm. level west. In addition, there is the 40 fm. level driving east of same shaft. At Richards's engine-shaft there are the 50 fm. level drivages going on east and west therefrom. In addition, there is the 40 fm. level driving west. These points of operation will be shown to involve important results; and, as observed throughout this report, the deepest point will also be first referred to. In Richards's engine-shaft sinking, and now about 7 fms., below the 50 fm. level, the lode is a very fine course of ore, worth upwards of 100*l.* per fm.; and, judging not only from its richness, but looking at its various collateral characteristics generally, it would most certainly seem that the confident opinion expressed at the last annual general meeting, as in respect of the sinking of this shaft (then 28 fms. from surface only) is near realisation. It was then intimated, looking at the lode and gossan in the shaft, that it might be relied upon there was a great and continuous run of ore underneath—as also, that in sinking at this point sooner or later, its point of concentration would be reached and realised. In the 50 fm. level, west of the shaft in question, the lode is also assuming an improved appearance—in fact, is becoming productive, being worth in the present end about 15*l.* per fm., the extent of progress of this drivage being now about 28 fms. from shaft. The ore ground gone through here is already 10 fms. in length, and, on an average, worth 12*l.* per fm., as stated in the estimates of the company's available stock of ore ground. In the 50 fm. level, east of this shaft (Richards's), the lode is showing a good course of ore, worth 35*l.* per fm.; this level has, up to the present time, been driven 37 fms. from shaft, and, on an average, for such length, this ore ground is worth about 18*l.* per fm., and at which capability of returns it has been carried into the estimates. And, here it is to be remarked, that such sources are not only important, as admitting auxiliary supplies towards the company's returns, but also as being certainly introductory to others much more productive, and lasting at increased depths.

By the estimates of the company's available ore ground, however, these explorations will be seen to have added considerably to the resources of the concern, and which, moreover, will be yet considerably increased by the drivage in question (the 50 east of Richards's), being carried on to communicate with the same level coming from Hitchina's shaft, as presently to be referred to, and where there is also a good lode, between which two points there is yet about 15 fms. to be laid open. There is also driving the 40 fm. level west from Richards's engine-shaft, which is now about 34 fms. therefrom; although the lode is not productive at this western shallower point of operation, yet it is to be fairly stated, in respect of its general character, to be a fine, strong, promising lode, composed for the most part of the right sort of gossan and capels. Attention is to be next claimed for the operations and developments in the eastern parts of this concern at, and east and west of, Hitchins's engine-shaft, which, as already intimated, is down to the 50 fm. level; the lode here (the deepest point in this part of the concern) is fully equal in produce to 80*l.* per fm. This valuable discovery, of course, excites the utmost possible desire and energy for deeper sinking; and with such view it is that there is now being opened required ground at the 50 for bob-piat, &c.—on completion of which, without a moment's unnecessary delay, the sinking of Hitchins's engine-shaft will be resumed, and that, too, in all possible certainty—that at increased depths, lasting discoveries will be realised of greatly-increased richness. In the 50 fm. level, and now about 13 fms. west from this shaft, the lode is worth 25*l.* per fm.; and on communication being effected, as between this and the drivage at the same level, coming east from Richards's, there will thereby be allowed best possible regular working of the ore ground laid open in these 50 fm. level explorations, which, as shown in the estimates of the company's stock of ore ground, is 90 fms. in extent, and which also will continue to prove a source of exceedingly good supplies, to assist in the keeping up of the company's samplings. At this level (the 50) there is also a drivage going east of Hitchins's engine-shaft, in the present end of which the lode is, indeed, a fine course of ore ground, worth 80*l.* per fm. Looking at the runs of ore ground, not only in this concern, but those in Wheals Maria and Fanny, they certainly dip east. On such ground, it is confidently to be calculated, that in this the eastern part of Wheal Josiah, more particularly at greater depths than at present reached, there will be realised great and lastingly profitable courses of ore.

From the foregoing remarks and observations, it cannot but be quite clear—in fact, forcibly conclusive—that the state and progress, present and prospective, of this concern, must be considered particularly satisfactory. At Wheals Jack Thomas and Frementor, there are no new features to advise. The objects involved in the carrying out of these concerns, will admit of but slowly progressive attainment. Suffice it to say, that each of their adit levels are kept steadily going, and more particularly in Frementor, with a view to the cutting of the various lodes a-head, which, as explained on many previous occasions, exhibit on their backs at surface appearances of considerable inducement; and now it is to be stated that, in consequence of the much greater extent to which these explanatory details, as in reference to the state and prospects of the company's different concerns, have been carried than was contemplated, and for prevention of any heavier charge of tediousness being brought against this report than it has already incurred, we must defer our intended other remarks of general tendency—notwithstanding, however, that such intended remarks are now clearly before our minds, not only as being closely in connection with the subject, but also as involving matters clearly suggestive of, and easily practicable for, the increased advantage and prosperity to the company. The consideration of such matters, therefore, will be undertaken at some future and sufficiently early period.

Before bringing this document to a close, we must be allowed the pleasure of acquainting the company, that our intended additional sampling of next week will make the gross returns of the company's concerns, for the month of April, equal in value to 9000*l.* We have now to take leave of the various foregoing, and, it is to be feared, amplified and too tediously detailed, matters. It is hoped, however, that by the aid thereof, together with the estimates and results submitted, that the subjects of the past and present working, as also state, present and prospective, of the company's several important undertakings, have been made intelligible; as also that, viewing the whole of the circumstances conjunctively, they will appear as constituting substantial groundwork for continuance of the welfare and prosperity of the proprietary.—J. H. Hitchins.

[Some very elaborate tabular statements accompany this report, which, of course, our space will not permit of publishing; but, the results being given, their omission does not in the least interfere with the general value of the document—however, they must be considered of much value to the directors, as affording most minute information on their respective workings.

Curbet Silver Lead.—A general meeting of the shareholders was held at the offices, George-yard, Lombard-street, on Tuesday last,—Thomas Field, Esq., in the chair.—The Secretary (Mr. Henry Thomas) having read the minutes of the last meeting, of the 28th July, which were duly confirmed, proceeded to read the directors and agents' reports—at the same time explaining the latter to the shareholders as he proceeded, from a sketch of the mine before the meeting, which appeared to give general satisfaction.—A statement of accounts were then submitted to the meeting, exhibiting the following results—viz.: balance of last account, 526*l.* 5s. 11d.; mine cost, &c., from July, 1846, to March, 1847, 3553*l.* 17s. 7d. = 4080*l.* 3s. 6d.—By sale of lead ores, 3356*l.* 10s. 6d.; arrears due, 127*l.*; 12 instalments, 500*l.* = 3983*l.* 10s. 6d.: leaving balance against the adventurers, 96*l.* 13s.—The Chairman expressed his regret at the result of the above account—at the same time it should be borne in mind, that a considerable sum had been expended during the period since the last meeting, in the purchase of a new boiler and pitwork, which, however, added to the value of their property on the mine.—A call of 10s. per share, payable on the 22d inst., was then determined on.

THE MEXICAN COMPANY.

The annual meeting of this company took place at the offices in Great Winchester-street, City, on Thursday.

John Oliver Hanson, Esq., in the chair.

The Secretary (Mr. Maude) read the notice convening the meeting, from the *Mining Journal* of the 24th April. The following report and balance-sheet were then read to the meeting:—

In the report which was presented at the last annual meeting to the proprietors, the directors were induced, on the strength of advices received from Mr. Fenochio, their agent at Yavesia, to hold out an expectation, that the result of last year's operations would be more favourable than those of the previous year, some of the causes having been removed, which had interfered so much with the operations of that year (1845). It is, therefore, with extreme regret, that the directors have now to report, that the result of the operations of the year 1846, has been so unfavourable as to occasion a loss, on that year's account, of 36755 6, or, at 4s. per dollar, equal to 1351*l.* 3s.,—including 500*l.*, reserved for the expenses of management in London. Thus reducing the loss at Yavesia, to 851*l.* 3s.; one-half of which has been occasioned by the working of the mines Santo Gertrudis and Cinlo Senores, in the district of Iotepexi, from which such different results had been anticipated. It is obvious, therefore, that the directors are not in a position to declare any dividend for the past year. The chief cause of this falling off, in the produce of these mines, has been the extreme poverty of the ores obtained from them, which, the directors regret to add, has also been the cause of the falling off in the produce of purchased ores generally, the ley of which has been of such a low standard, as to induce Mr. Fenochio to reject a large portion of those which were offered to him for purchase.

Under these circumstances, Mr. Fenochio has discontinued the working of the mines Santa Gertrudis and Cinio Senores for account of the company, and has handed them over to buscones, or tributers, to be wrought by them, on condition of their delivering to Mr. Fenochio, all such ores as he may choose to purchase, on a tariff of prices previously agreed upon; thereby securing to the company, the pre-emption of the best ores to be obtained from these mines, without any obligation to purchase those of a low standard, or to incur any expense whatever in the working of the mines; by which all responsibility, on the part of the company, will, for the future, be avoided. Thus circumstanced, Mr. Fenochio was induced to turn his views to the acquisition of the mines in the district of Iotolapa, on the slope of the mountain, on which Yavesia is located, towards the valley, 36 leagues east of Oaxaca, and about two days journey from Yavesia, to which his attention had been drawn by buscones, who produced to him samples of ores, which they had obtained from these mines, so well adapted to barrel amalgamation, and holding out, in other respects, such advantages, with regard to the condition of the mines themselves, and the facility of working them, as to induce Mr. Fenochio to take the preliminary step of denouncing them, in the name of a "Buscon," and incurring a trifling expenditure, in the first instance, for the erection of a few huts, for the buscones, and a small smithy for the repairs of their tools. Subsequent operations having enabled the buscbnes to send to Yavesia fresh samples of ores from these mines, which had confirmed, on a larger scale, the good quality of the former specimens, Mr. Fenochio was induced, personally, to visit this district, and to make as rigid an examination of its mines, and of their locality, as the state of the district would then admit of. His report of this survey, which will be found in the Appendix, under date the 18th of December, will, no doubt, satisfy the proprietors, that it left no alternative to the directors but to approve of these preliminary measures and to sanction Mr. Fenochio's giving that extension to them which is suggested by himself, and which the directors entertain no doubt the proprietors will fully acquiesce in. To enable them, however, to form an impartial opinion on this important point, the directors deem it proper to annex, in Appendix, extracts from all Mr. Fenochio's letters relating to this undertaking, and to add to them a copy of his last letter, of 16th February (received on the 24th ult.), which places the affairs of the company under his management, in so clear and straightforward a position, as not to require any comment on the part of the directors.

The directors deem it proper, however, further to state, that with a view of providing for the necessary disbursements of the company here, for this year, they have been under the necessity of disposing of an Exchequer bill for 500*l.*, thus reducing the indemnity fund to 1500*l.* The directors now submit the balance-sheet of the Oaxaca ledger for the past year; the balance of which, transferred to stock account, amounts to 5113,300 or 22,660*l.* The estimated value, on the 31st December last, of the plant, stores, and outstanding debts, due on that date to the company. They likewise submit, in conformity with the deed of constitution, the balance-sheet of the company's accounts here, from its commencement to the 31st December last, examined and attested by the auditors, and have to report, that two of the directors—viz., J. O. Hanson, Esq., and H. Wheeler, Esq., and one of the auditors, W. W. Terrington, Esq., are now in turn, by settled rotation, to go out of office, but, being eligible, now offer themselves for re-election for the office of directors and auditor.

Balance-Sheet, from the Commencement, in March, 1825, to 31st Dec., 1846.

RECEIPTS.

Dr.			
To capital for the amount received for deposits and calls, to the 31st of Dec., 1845, as per statement, submitted to the proprietors at the annual meeting, held on the 7th of May, 1846	£392,410	0	0
Profit and loss:—Balance on the 31st Dec., 1846, consisting of dividends, interest and profit on sale of stock and Exchequer bills on the indemnity fund account, discount on prompt payments, and other items	2,159	0	1
	75	15	6
Dividend account for unclaimed dividends			
Total	£394,644	15	7

DISBURSEMENTS.

Cr.					
By commissioners in Mexico for the amount transmitted to them, from the commencement of operations, in 1825, to the 31st Dec., 1846			£361,727	2	6
General expenses for the amount disbursed under this head for salaries, rent, law charges, taxes, advertisements, &c., from the commencement to the 31st Dec., 1845, as per statement, submitted to the proprietors at the annual meeting, held on the 7th May, 1846	£30,048	10 3			
	470	10 8—	30,519	0	11
Addition to ditto, in 1846			147	11	0
Fixtures and furniture in the office, including recent repairs, valued at			2,000	0	0
Trustees indemnity fund for 2000*l.* Exchequer bills, valued at par					
Cash in hand—viz.:					
Masterman, Peters, and Co.	£127	12 8			
Bank of England	4	3 3			
Petty cash	26	19 9			
Unclaimed dividends	75	15 6—	224	11	2
			16	10	0
Stamp account, for transfers on hand					
Total			£394,644	15	7

The Secretary also read the various communications from Mr. Fenochio, as to the prospects of the new undertaking at Iotolapa (alluded to in the report), which were too lengthy for insertion in this Journal.

A Proprietor remarked, that it did not appear by the report what rent they were to pay for these new mines.

The Chairman replied—none whatever. He regretted very much that they had not a better report to present to the meeting; but it was unnecessary to dwell on the causes of this, as they were so amply detailed in the report, and in the correspondence during the year, to which the proprietors, at all times, had full and unreserved access. It was, no doubt, a great disappointment to them all; but it was evident from the report, that Mr. Fenochio had no other alternative than to pursue the operations on the plan pointed out by himself, as the only chance of re-establishing the prosperity of the company. The arrangement respecting the purchase of ores was very satisfactory, inasmuch as it imposed no liability whatever on the company, beyond the use of their plant and stores, which, in the Mexican balance-sheet, were valued at $113,300, or 22,660*l.* Some of these would be immediately saleable, in case of necessity—for instance, the quicksilver and iron, of which they had on hand a supply equal to two or three years' consumption; but, with respect to the other stores, in the event of a forced sale of them, a great loss would, no doubt, be sustained. Under these circumstances, he hoped they would concur with the directors in adopting the recommendation of Mr. Fenochio, to proceed with the undertaking—at all events, until the result of the Iotolapa Mines could be ascertained—the more especially as no additional charges were likely to be thereby incurred, nor any additional capital required from hence. With these observations, he would move that the report and balance-sheet be received, adopted, and entered in the minute book of general meetings for the use of the proprietors.

Mr. Engstrom seconded the motion, which was agreed to unanimously.

He then moved, that John Oliver Hanson, and Henry Wheeler, Esqrs., who now retire from the direction by settled rotation, but are re-eligible, be re-elected directors; and that William Walmesley Terrington, Esq., be re-elected an auditor of the company. He then remarked, that he had been connected with the company for the last 20 years, and had witnessed, with satisfaction, the conduct of their directors, who, as he had no doubt the proprietors were fully aware, had continued from its commencement, to manage the affairs of the company without any remuneration whatever. (Hear, hear.) This motion, having been duly recorded, was also passed unanimously.

Mr. Hanson, in returning thanks, remarked, that he was not a man to desert a sinking vessel, and had no doubt that his brother directors were actuated with the same feelings, and would stand by her so long as there was a chance of preserving her. (Hear, hear.) He hoped when they next met, that it would be under more favourable aspects than the present.

A vote of confidence was then unanimously passed in favour of Mr. Fenochio (the agent), for the great zeal and ability with which he had continued, under such adverse circumstances, to administer the affairs of the company in Mexico. A vote of thanks was passed unanimously to the chairman and directors, which having been duly acknowledged by the chairman, the meeting was adjourned.

LLANCYNFELIN MINING COMPANY.

At the second annual general meeting of shareholders, held at the offices of the company, 44, Finsbury-square, on Friday, May 7,

P. Stainsby, Esq., in the chair.

The circular, dated April 15, convening the meeting, having been read, the following report and accounts were submitted:—

The committee beg to report to you, that since the last general meeting the steam-engine has been erected, which is of sufficient power to put the mine down to a considerable depth, to which stamps are attached to reduce the ores to a marketable state. Most eligible dressing-floors have been constructed, the necessary buildings have been erected, and every thing required provided to work the mine on a large scale, should the prospects warrant its extension. Last month the first sale of ore was made, being 40 tons, which realised, at the price of 10*l.* 7s. 6d. per ton, 415*l.* The accounts have been audited, as heretofore, by Mr. Leary, the accountant, and are as follows:—

Abstract of Balance-Sheet.

Cost—Jan. to Feb.	£5192	19	5
Directors' attendance	355	0	0
London management	160	0	0
Stationery	12	10	0
Petty cash	14	8	0
Total	£5654	17	5

Received—1st instalment	£937	10	0
,, 2d ditto	1537	10	0
,, 3d ditto	1255	0	0
,, 4th ditto	896	0	0
Balance from last annual acc.	253	0	7
Present balance	835	16	10
Total	£5654	17	5

LAMHEROOE WHEAL MARIA MINING COMPANY.

The two-monthly meeting of adventurers was held at the offices of the company, King-street, Cheapside, on Thursday, the 6th inst., when the following balance-sheet and report were read and adopted:—

Abstract of Statement of Accounts.

Calls last balance-sheet and interest	£8192	5	6
,, £1 per share, 19th April	2048	0	0
Due on account of liabilities	207	10	8
Total	£10,447	16	2
Cost, as per last balance-sheet	£8222	17	2
Paid E. W. Snell, as purser	50	0	0
Ditto for 36 shares purchased	91	0	0
Calls due on ditto	82	0	0
Lithographing two plans and two sections	12	10	0
Printing report, &c., and advertisements	12	10	1
Secretary's salary (for February and March)	10	10	0
February cost-sheet	257	1	8
March ditto	214	2	3
Arrears of calls due	932	0	0
Balance at bankers	573	5	0
Total	£10,047	16	2

The balance sheet had been examined, found correct, and signed by the auditors Messrs. T. Ruston and H. Smith.

Lamherooe Wheal Maria, May 5.—In answer to the questions—1. When do I expect to have sunk to the driving point in both shafts?—I beg to observe, that such must depend on the point in depth to which we may sink before we put out the cross-cut; our present depths are, at engine-shaft 20 fms. 2 ft. 8 in., and at Davey's 23 fms.; and, as we take the difference in levels at surface at about 9 fms., it will be seen that they bear a relation to each other as to their respective depths—this can be illustrated by reference to the section. By the section you have in London, you will observe that the point at which it is proposed to drive the cross-cut north is, after having intersected and gone through the L lode—the K lode having been already cut in sinking the shaft, which I calculate will be about 4 to 5 fms. sinking of Davey's shaft; and, having gone through the lode, and cut a piat, we shall at once proceed to drive north, and take the K lode referred to, which is underlaying in that direction, and the I lode, which has a south underlay, and which I expect forms a junction with the K lode, at about that level—so that a cross-cut taken out north would command the three lodes in driving 10 or 12 fms. The present cost of sinking this shaft is 20*l.* per fm., and I calculate on sinking about 3½ fms. per month—so that to cut piat, it would take four to five months, and then it would further require two to three months to intersect the three lodes mentioned. As regards the engine-shaft, it may be prudent to keep on the sinking of this even to a lower depth than that previously calculated upon; however, on this point I would rather defer offering an opinion until we have sunk a few fathoms, and intersected the lodes named.

2. When do I expect to cut the L lode?—This question is answered in the preceding remarks, say, in further sinking 6 fms., may take two months or better.

3. What have the tributers done on the B lode?—The bargain take is out, there were three employed, and the tinstuff raised required to be burnt before any returns can be made, there being no convenience we can avail ourselves of at the moment. The parcels now employed in working on the A, or most north lode, for tin, at 11s. in the 1*l.*; but I do not expect they will make much progress, as they will be met by the water.

4. At what depth is it proposed to drive the cross-cut, to intersect all the south lodes?—and what length of time, and at what cost, would the cross-cut require?—This is answered in the preceding remarks in a great measure—at the same time, if it is meant, the several lodes, south of the engine-shaft, to the extreme south lode, near the boundary, including F, G, H, I, K, L, and M, I have to observe, the distance is about 150 fms.; but so much depends on what we may discover on driving on the I, K, and L lodes, that I do not wish to offer a decided opinion as to the policy of driving a cross-cut this length, or the cost. I should, perhaps, recommend on getting down Davey's shaft to the point before named, to put out a cross-cut south to take the Benny, or M lode, which, I should think, would be intersected in about 25 fms. driving, and which would take some four to five months; this, however, could be going on at the same time that we are driving north.

5. What will be the monthly cost from this date to the end of December?—This most depends upon the adventurers, as our sett is sufficiently extensive, and lodes discovered, to warrant a much further expenditure. Our workings are confined to sinking the two shafts—whereas, there are other lodes which will recommend themselves, and which, I think, should be proved; however, we have our work for the present cut out, in getting down the two shafts. Our present monthly cost is about 200*l.* for labour and materials used on the mine, with engine cost, &c.; but which, of course, is necessarily enhanced in putting down an extra lift of pumps—our present monthly cost being larger, on account of the charge for pit-work in Davey's shaft, &c.—and should say, we can go on quietly with an expenditure of from 200*l.* to 220*l.* per month; but it should not be lower, as the working of any mine is naturally attended with certain dead cost—such as working the engine, agency, &c. Under these circumstances, assuming that we continue, as at present, expending 200*l.* to 220*l.* per month, our outlay for the present time to Christmas next would be 1600*l.* to 1800*l.*—against which, of course, is to be set any returns we may make in the interim. I may mention that in the Orchard shaft, which we cleaned up, we found some pretty prills of rich ore—a stone of which Mr. English will take with him to London, and which is only 6 fms. from surface. This is from the L lode, which we expect to take in sinking Davey's shaft, as before described.

I have only, in conclusion, to say, that having communicated with Mr. English on the several points of working, and conveyed to him my opinions, I must beg to refer you to that gentleman, who, I have his authority to state, concurs generally in the preceding report.—John Tabb.

WHEAL BENNY MINING COMPANY.

A meeting of adventurers was held at the offices, King-street, Cheapside, on Thursday the 6th inst., when the following report from Capts. J. Tabb and T. Penalana, and accounts, were read:—

Wheal Benny, April 20.—Ford's engine-shaft is sunk 17 fms. from surface; we intend sinking 4 fms. deeper, and then driving to intersect the Ford and Benny lodes. We commenced driving our cross-cut south by four men, and have open cut and driven 4 fms. This cross-cut is intended to intersect all south lodes, and will enable us to prove them at a given depth, at least from 40 to 50 fms., without the aid of machinery. We have also sunk 3 fms. on the lode last discovered, which is 5 ft. wide, and underlaying north about 2½ ft. in the fm. The men that were sinking are put in the cross-cut, making, in the whole, six in number, and it will be developed with all possible speed.—T. Penalna; John Tabb.

Abstract of Statement of Accounts.

Dr.—Calls made on 226 shares, at 6*l.* 10s. per share	£1664	0	0	
Due for sundry labour, &c.	76	10	10—	£1740 10 10
Cr.—Cost, as per last balance-sheet	£1438	5	3	
February cost	126	6	9	
March ditto	106	15	0	
Sundries	15	4	3	
Arrears of calls	36	7	6	
Cash at bankers	7	12	1—	£1740 10 10

A continuation of mining meetings, and letters, will be found in the 8th and 9th pages.

MINING NOTABILIA.

[extracts from our correspondence.]

Condurrow is looking much better, and I think, ere long, will stand high in the share list.

Wheal Trythena.—They have now effected the clearing of a new shaft; the returns will be considerobly augmented; the recent discovery continues good.

South Wheal Francis and West Seton are not looking so well; the ends in the former are poor.

I am given to understand there is an improvement in Trewallack Mine, they having cut through the slide in the 20 fm. level south, and have a very kindly lode, and now to within 4 or 5 fms. to where they have that fine lode at the adit above, where they drove through a lode for nearly 80 fms. long, and nearly 4 ft. wide—a fine gossan and flookan lode, with good bunches of lead for nearly the whole distance; this 20 fm. level will now be driven directly under this lode, leaving backs 20 fms. high, which, no doubt, will work at a low tribute.

Wheal Ryalton.—A lode, supposed to be the East Rose lode, was cut here on the 30th April. The water rushed out so fast, that it filled the cross-cut, and rose 7 fms. in the shaft, washing out stuff composed of soft spar and stones of lead. The water was forked in a few days; but, instead of removing the boards which were put up when the lode was first cut, it was determined to drive 5 fms. north and south by the side of the lode, and prick into it occasionally, to let it drain, and avoid the danger of a run. Great expectations are formed of the lode. Trewallack, the adjoining mine, is also looking better in one or two places.

At Caradon United a lode has been cut in the 28 fm. level, but not yet got through.

At Trehane they have just sold another parcel of ore—45 tons, at 19*l.* 13s. The lode going north is improving in the 30, which speaks well for the northern ground in Trelawney.

South Wheal Francis.—A meeting of adventurers was held at the mine on the 3d inst., when a dividend of 15*l.* per 1-124th share was declared, leaving a balance in favour of the mine of upwards of 500*l.*

Balleswidden.—At a meeting of adventurers held at the mine, on Wednesday last, the following statement of accounts were submitted and passed, shewing a profit upon the two months of between 700*l.* and 800*l.*:—By amount of tin, 4913*l.* 2d.; materials sold, 274*l.* 6s. 6d.; sundries, 33*l.* 18s. 10d.—5251*l.* 5s. 6d. To wages for Jan. and Feb., 1847, 2896*l.* 3s. 8d.; coals, 249*l.* 5s. 1d.; carriage sundries, 108*l.* 9s. 10d.; merchants' bills, 1114*l.* 8s. 10d.; lords and bounders' dues, 149*l.* 15s. 9d.—leaving balance in favour of adventurers, 738*l.* 2s. 9d. The prospects of the mine are considered more favourable than ever. The next meeting was fixed for the 30th June.

East Coombe.—A meeting of adventurers was convened to be held at the Fortescue Arms, Barnstaple, on Wednesday, the 5th inst.; but, it appearing that the circular calling the same was not in accordance with the Cost-book System, and the regulations under which the company was constituted, no meeting took place.

North Pool.—The usual two-monthly meeting of adventurers was held on the mine on Tuesday last, when the following statement of accounts for Jan. and Feb. was submitted and allowed:—To balance on Dec. 31, 1846, 457*l.* 2s. 9 costs, &c., for Jan. and Feb., 882*l.* 7s. 5d. = 1339*l.* 9s. 5d.—By ores sold (less dues), 815*l.* 17s. 4d.: balance against the adventurers, 523*l.* 12s. 1d.

East Crowndale.—A fire was discovered in the engine-house this morning (Thursday), which at one time threatened awful destruction; but the fire-engine arriving from Tavistock, succeeded in extinguishing the flames—not, however, before the floors and roof were entirely destroyed. It is hoped the damage will be repaired in a few days.

Current Prices of Stocks, Shares, & Metals.

Mines.—The market this week has been generally very heavy; and during the first three days of the week very little was done—but since several transactions have taken place, and we are led to hope that some considerable improvement will take place. The transactions generally have not been in shares of large amount—still there is a tendency to improve. The mines throughout the two counties of Devon and Cornwall are upon the whole looking well, and the reports from new mines are generally satisfactory.—We always feel regret when we hear of the postponement of dividends, and especially when so much improbability is assigned as to cause. A tin mine not far off from Hayle was to have paid a dividend of 30s. per share about two months since; but we learn it has been postponed for two months longer, in consequence, it is stated, of upwards of 1000*l.* worth of tin ore having been stolen from the undressed pile!! We have certainly heard of Cornish *geese* bolting the piles of ore, when the expectations of the agents have disappointed the shareholders, but here we have a system of wholesale "kitting."

From a disappointment, we will turn to a pleasing retrospection—that of another "Maria," now known as the Great Devon Consols. The annual meeting of the adventurers has been held this week; and from the statement of accounts presented, we find the cost from February to Dec. amounted to 49,109*l.*; the sales during same period to 93,610*l.*; and the dividends paid during the year, 25,600*l.*!

There has been a demand for Trelawneys, Wheal Mary Anns, Herodscombes, Treleighs, &c., and several shares have changed hands.

Business in the following mines has been done—viz.: South Tamar, Wh. Franco, Kirkcudbrightshire, West Providence, Wh. Trelawney, Mary Ann, Trehane, Tremayne, Alfred Consols, Herodscombe, Caradon, Condurrow, Comb Lawn, North Pool, West Fowey, Plymouth, Wheal Yeoland, Gwinear Consols, West Seton, Herodsfoot, Ryalton, Stray Park, South Tamar, St. Michael Penkivil, Wheal Martha, Wheal Gill.—In the foreign share market, very little has been done. The only business appears to have been in South Australians, Kinzigthal, Bolanos, and St. John del Rey. We had hoped that the arrival of Brazilian packet *Penguin*, with 317 lbs. of gold, valued at about 20,000*l.*, would have improved the prices; but we do not learn that many shares have been done.

Railways.—This has been one of the dullest business weeks, both in the Stock Exchange and the share market, which the jobbers of Capel-court have experienced for a long time. The depression in the money market, and the difficulty of obtaining an easy and ready accommodation, has greatly tended to materially affect speculation in shares; and the limited business that has been done, has been chiefly in the old and well-established lines. Great Western has been done at 26 to 28 prem.; London and North Western, 170 to 172; London and South Western, 60 to 62; Midland, 114 to 116; and South Eastern and Dover, 36 to 38. There has been a severe depression in the Liverpool share market—the sellers were numerous, and buyers few; Birmingham, Manchester, Leeds, and Bristol, have also partaken of the same dullness.

Railway Committees.—The Select Committee of the House of Commons decided yesterday, that the preamble of the Birmingham and Oxford Junction, and Birmingham, Dudley, and Wolverhampton Amalgamation Bill, had been proved.

On Thursday, Capt. Symons, the Government Inspector, made an experimental trip over the newly-formed line of the Croydon and Epsom Railway, which is to be eventually extended to Portsmouth (but not as atmospheric), and proved highly satisfactory. It will be opened to the public on Monday next.

The Wisbeach branch of the Eastern Counties was opened on Monday last.

Railway Department.—The total amount proposed for the expenses of the Railway Department in the present session, is 11,966*l.* The three commissioners enjoy salaries—the first, Mr. Strutt, of 2000*l.*, and the other two, Mr. Ryan and Major Brandreth, of 1500*l.* each; the secretary, Mr. Bruce, one of 1000*l.*; the head of the Statistical and Topographical Department, Capt. Harness, one of 800*l.*; and the two inspectors in the Engineer Department (Capts. Coddington and Simmons), salaries of 600*l.* and 400*l.*

The Proprietors of the Taff Vale Railway v. Nixon.—This appeal, which was finally argued, on Thursday, before the House of Lords, was against a decree of the Vice-Chancellor of England—the particulars of which have already appeared. At the termination of the arguments, the Lord Chancellor moved the judgment of the House, when the decree of the court below was affirmed.

The directors of the Bank of England intimated yesterday afternoon, that they will advance money at 4 per cent. to the holders of Exchequer Bills—a circumstance which at once caused a decline in the value of money in the Stock Exchange, which, no doubt, will be beneficially felt out of doors, and in the general discount market.

Hull, Thursday.—The share market has remained dull and depressed since our last, with few buyers, except at the lowest quotations of each day.

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2750 miles of railway, was 158,693*l.*, thus accounted for:—81,367*l.* for the conveyance of passengers only, 41,481*l.* for the carriage of goods, and a remainder of 35,844*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 18,186*l.*, when the mileage was about 1,990.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1847	1846
Arbroath and Forfar	15	£142,900	3 p.c.	£227 8 6½	£179
Chester and Birkenhead	15	658,293	2½	2173 11 4	625
Dublin and Drogheda	35	689,248	3½	858 5 6	747
Dublin and Kingstown	6	349,736	9	1881 5 11	1831
Dundee and Arbroath	16½	156,323	6	362 9 8	311
East Lancashire	29	814,417	—	773 12 0	—
Eastern Counties	184½	6,513,026	7	10150 10 9	8333
Eastern Union	17	227,253	—	536 0 0	—
Edinburgh and Glasgow	46	2,112,136	6	3472 4 1	3271
Glasgow, Paisley, and Ayr	53	1,567,281	7	2259 5 6	2024
Glasgow, Paisley, & Greenock	23	635,918	2	1031 9 7	899
Great Southern and Western	86½	1,343,718	—	1311 19 8	—
Great Western	241	9,714,329	8	19199 9 1	19275
Ipswich and Bury	26½	303,768	—	441 0 0	—
London and North Western	378½	18,042,004	10	43075 5 4	29041
London and Blackwall	4	1,102,717	1½	943 2 10	1030
London, Brighton, & South Coast	113	5,109,667	7	6615 11 7	4293
London and South-Western	137	1,578,789	9	7210 14 9	7156
Manchester & Leeds	117½	5,036,391	5½	7927 12 1	6130
Manchester, Sheffield, & Lincolnsh.	49½	1,678,108	5	2054 7 8	1589
Midland Company	329½	7,862,274	7	19066 5 11	15802
Newcastle and Berwick	9	1,184,079	5	778 4 7	—
Newcastle and Carlisle	65	1,184,080	5	2481 3 2	1843
Norfolk	70½	1,199,689	7	1845 0 6	1206
North British	72½	1,459,958	—	1616 12 10	—
Preston and Wyre	30	432,014	2½	614 4 7	573
Shrewsbury and Chester	15	354,945	—	600 13 10	—
South Devon	20	1,061,283	5	507 14 6½	—
South-Eastern	140½	5,888,411	3½	7298 10 4	6852
Taff Vale	30½	888,411	6½	1470 15 0	1177
Ulster	25	358,353	5½	902 16 4	624
York and Newcastle	183½	1,712,317	9	7733 9 5	6359
York and North Midland	162½	2,483,286	10	6014 12 3	4802

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 16 6—Bates's West Hartley 17 6—Bell and Brown 18 6—Framwellgate 17 9—South Pesareth 16—Holywell Main 17 6—Wall's End Brown's Gas 15—Bewicke and Co. 18 6—Eden Main 19—Braddyll's Hetton 20—Haswell 20—Brown's Deanery 16 3—Maclean's Tees 17 6—Seymour Tees 19—West Tees 17—Derwentwater Hartley 17—Llangennech 22 6—Sidney's Hartley 17 6.—Ships at market, 169; sold, 162.

WEDNESDAY.—Adair's Main 16 6—Buddle's West Hartley 17 6—Carr's Hartley 17 6—Charlotte Main 17—Davison's West Hartley 17 6—Dean's Primrose 15 6—Dipton Tanfield 18—Holywell Main 17 6—New Tanfield 15 6—Original Tanfield 15—Townley 16 6—Tanfield Moor 17 6—Twizel Main 15—West Hartley 17 6—Wylam 16 6—Wall's End Acorn Close 18—Bewicke and Co. 18 6—Brown's Gas 15—Gosforth 18 6—Heaton 18 6—Hotspur 17 9—Hedworth 16 6—Hilda 17 9—Killingworth 18—Northumberland 17 9—Riddell's 18 3—Walker 18—Wharncliffe 18 6—Eden Main 18 9—Belmont 19—Braddyll's Hetton 19 9—East Hetton 18—Haswell 20 6—Hetton 20 3—Keepier 19 6—Lambton 19 9—North Hetton Lyons 18 9—Russell's Hetton 19 9—Richmond 18 9—Shotton 19 6—Stewart's 20 3—Hudson's Hartlepool 19 3—High Thornley 17 6—Kelloe 19 9—Adelaide Tees 19 9—Barrett 18—Gordon 17—St. Helen's Tees 17—Seymour Tees 19—South Durham 19—Tees 20—West Tees 17—Derwentwater Hartley 17—West Hartley Netherton 17 6—Llangennech 22 6—Sidney's Hartley 17 6.—Ships, 177; sold, 146.

FRIDAY.—Adair's Main 16 6—Davison's West Hartley 18—Dean's Primrose 15 6—Dipton Tanfield 15—Holywell Main 17 6—New Tanfield 15 6—Ord's Redheugh 16 9—Tanfield Moor 17 6—Usworth Main 17 6—West Hartley 18—Wylam 17—Wall's End Brown's Gas 15 3—Gosforth 18 9—Hedworth 16 6—Eden Main 19 to 19 3—Braddyll's Hetton 20 to 20 3—East Hetton 18 9—Hetton 20 6—Lambton 20—North Hetton Lyons 19—Russell's Hetton 20—Richmund 19 3—Stewart's 20 6—Hudson's Hartlepool 19 6—High Thornley 18—Brown's Deanery 18 6—Seymour Tees 19—Tees 20 3—West Cornforth 18 6—Derwentwater Hartley 17 6—Ships at market, 45, sold 37, unsold 8.

Electric Telegraphs.—The action brought by the Electric Telegraph Company against Messrs. Gamble and Nott, in the Court of Common Pleas, for infringement of patent, was decided in favour of the latter yesterday.

Abolition of the Atmospheric System on the Croydon Railway.—We understand that the directors, at a meeting on Tuesday, resolved on abandoning all idea of introducing Mr. Samuda's system on their Epsom line. Mr. Samuda is about commencing an action for breach of agreement.

Messrs. Clarke and Varley's system of atmospheric propulsion, is regularly, and most satisfactorily, working at Blackwall. We shall give some particulars in our next.

PRICES OF MINING SHARES.

Shares.	Company.	Paid.	Price.
	BRITISH MINES.		
1000	Abergwesain	7	12
512	Albert Consols	1	2½
1024	Alfred Consols	4½	35
235	Andrew and Nangiles	28½	18
10000	Ayrshire Iron Company	2½	2½
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	2	—
1000	Barristown	4½	20
4000	Bedford	2½	3½
128	Besore Lead Mine	14	10
315	Birch Tor Tin Mine	21½	10
8000	Blaenavon	50	40
100	Botallack	175	225
120	Brewer	5	7
10000	British Iron, New, regis.	10	17½
—	Ditto ditto, scrip	10	19
128	Budnick Consols	52½	40
128	Burthy	20	21
100	Bwich Cwmertin	20	—
128	Callestock	17	50
1000	Callington	19	29
256	Caradon Consols	47	4
256	Caradon Copper Mine	9½	1
256	Caradon Mines	22½	20
256	Caradon United	24	15
256	Caradon Wh. Hooper	20	4
1000	Carn Brea	15	100
2048	Carmarthen Consols	2	5
112	Charlestown	200	100
166	Cleveland	9	2½
1900	Combmartin	7½	4½
1000	Comblawn	5	1½
128	Comfort	45	80
256	Condurrow	20	20
2560	Cook's Kitchen	14	5½
1000	Copper Bottom	1	5
1024	Cosheen	4½	20
240	Craddock Moor	15½	15
128	Creeg Brawa	120	150
500	Cubert Mine	12½	20
2048	Dartmoor Consols	2	2½
7100	Derwent	8½	5
1024	Devon & Courtenay Con.	5½	4
1000	Dhurode	2	5
186	Dolcoath	30	50
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
256	East Alvenney	3	10
112	East Caradon	40	40
2048	East Crowndale	4½	2½
512	East Combe Silver-Lead	6½	6½
128	East Pool	5	20
100	East Relistian	22	40
9000	East Tamar Consols	1½	2½
—	East Wheal Albert	1	3
94	East Wheal Crofty	280	310
256	East Wheal Fortune	2	3
128	East Wheal Rose	50	1200
—	East of Scotland Iron Co.	2½	2
123	East Wheal Seton	14	20
256	Exmoor Wh. Eliza	3½	10
512	Fowey Consols	40	45
20000	Galvanised Iron Co.	10	9½
10000	Gen. Mining Co. for Irel.	½	½
2048	Georgia Tin Mines	1½	1½
1000	Godolphin	25	35
256	Gonamena	31½	65
128	Goonvrea	4	½
244	Grambler & St. Aubyn	—	20
100	Great Consols	1000	400
256	Great Callestick Moors	22	25
2560	Great Michell Consols	1½	4
256	Great Resugga Moor	2	4
512	Gt. Wh. Rough Tor Con.	2	25
1800	Great South Tolgus	2	2
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
256	Gwinear Consols	5	18
1000	Hanson	14	2
1000	Harrowbarrow Old Mine	6½	3
800	Hawkmoor	3	5
6000	Heigniton Down Con.	½	2½
256	Herodscombe	½	12
256	Herodsfoot	14	13
10000	Hibernian	13½	1
—	Hobb's Hill	4	3
1000	Holmbush	18	10
256	Ivy Tor	1½	2½
627	Kirkcudbrightshire	4½	9½
2048	Lamleroose Wh. Maria	9	4
74	Lanarth & Penstruthal	—	10
2048	Lanivet Consols	4	2
200	Larkholes	1	3
160	Levant	—	90
1000	Lewis	15	6
1280	Llancynfelin	6	10
1000	Llwyn Malees	8	—
2600	Llynvi Iron	50	60–65
256	Lostwithiel Consols	7	7
128	Ludcott	3	3
4000	Marke Valley	10	3½
5000	Mendip Hills	2	1½
90000	Mining Co. of Ireland	7	8½
256	New East Crowndale	3½	3½
128	North Fowey Consols	25	20
100	North Pool	45	160
70	North Roskear	10½	350
512	North Treburget	2	3
100	North United	41	20
256	North Wh. Abraham	½	12
262	North Wh. Leisure	1½	3½
128	North Wh. Providence	2½	3
15000	Northern Coal Co.	23	2
1200	Old Delabole Slate Co.	25	50
2000	Pantdrainiog Slate Co.	2½	3
128	Par Consols	900	1000
1024	Pembroke	1½	6
256	Penhallow Moor	15	4
4000	Pennant	1	3
100	Penrhiw	30	65
256	Pentuan Wheal Mary	2½	6
128	Pen-y-Cefn Mine	50	55
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	65
512	Plymouth Wh. Yeoland	2½	6
2048	Prince Edward	1½	1½
112	Providence Mines	35	45
256	Redruth Consols	3	10
10000	Rhymney Iron	50	30
256	Rose Consols	10	6
1000	Rosewall Hill	1	5
—	Shotts Iron Company	50	70
2500	Silver Valley	4	1½
128	South Caradon	10	400–10
2000	South Dolcoath	2	2
256	Sth. Friendsh. Wh. Ann	14	14
200	South Harvannah	23	26
9000	South Tamar	½	½
256	South Tolgus	9½	20
	BRITISH MINES—continued.		
800	South Towan	10	1½
256	South Trelawney	15½	10
128	South Yeoland	16½	30
128	South Wheal Basset	110	80
124	South Wh. Francis	160	245
256	South Wh. Hope	—	5
1000	South Wh. Maria	2½	2
256	South Wheal Rose	11½	1
10000	Southern & Western, Irish	2	4–5
256	St. Austell Consols	8	14
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10
1000	Stray Park	43	30
9600	Tamar Consols	5	5
1024	Tavy Consols	4	3
6000	Tincroft	7	9
3000	Tin Vale Consols	½	1½
256	Ting Tang	15	9
128	Tokenbury	140	17½
256	Tolpetherwin	3½	3½
256	Trehane	2	22
8000	Treleigh Consols	6	4
256	Trenow Consols	30	25
96	Tresavean	10	200
120	Trethellan	5	27½
120	Treviskey and Barrier	130	160
256	Trewollack	20	20
128	Trewellard	12	26½
6000	United Hills	5	1
100	United Mines	300	500
256	Wellington Mines	15	30
128	West Basset	45	30
256	West Caradon	20	168
128	West Cargoll	2	12
512	West Fowey Consols	40	15
256	West Grambler	7	8
—	West Kekewich Consols	—	3
256	West Providence	1	20
200	West Seton	40	70
—	West of Scotland Iron Co.	210	217
130	West Trethellan	5	30
256	West United Hills	2½	4
256	West Wh. Friendship	7½	4
3845	West Wheal Jewel	11	2½
2560	West Wh. Maria	1½	1
256	West Wheal Shepherd	5	15
256	West Wheal Tolgus	21½	3
256	West Wheal Treasury	19	20
5200	Wicklow Copper	5	15½
184	Wheal Adams	41	28
1000	Wheal Agar	—	8
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	1½	4
237	Wheal Anderton	16½	30
128	Wheal Ann	—	50½
128	Wheal Arvose	3½	4
1024	Wheal Ash	2½	12
120	Wheal Ball	5½	150
2560	Wheal Barbara	1½	1½
256	Wheal Benny	6½	4½
256	Wheal Blencowe	8	15
256	Wheal Bucketts	20	29
256	Wheal Byon Consols	½	½
256	Wheal Calstock	3	4
136	Wheal Clifford	190	190
1024	Wheal Concord	6½	2
128	Wheal Courtenay	—	20
6000	Wheal Curtis	1½	2
256	Wheal Dyke	12	13
512	Wheal Elizabeth	2½	3
256	Wheal Fortescue	5½	9½
512	Wheal Fortune Consols	3½	6½
2048	Wheal Frederick	2	2
388	Wheal Franco	27	35
256	Wheal Gill	19½	9
1024	Wheal Grace	2	2½
128	Wheal Harriet	45	50
2048	Wheal Holwell	1½	1½
256	Wheal Jane	11	25
256	Wheal Kekewich	4	4
256	Wheal Louisa	6½	11
112	Wheal Margaret	79	200
256	Wheal Maria (Hayle)	19	25
1024	Wheal Maria	1	350
4000	Wheal Martha Consols	5	2
512	Wheal Mary Ann	5	26½
256	Wheal Mary Consols	34	25
256	Wheal Mary (Lanivet)	6½	4
256	Wheal Maude	1½	1½
128	Wheal Metha	23	22½
128	Wheal Pollard	12½	12
210	Wheal Prospect	4	7
128	Wheal Reath	1	17
128	Wheal Rose	60	42
99	Wheal Seton	214	300
256	Wheal Sisters	29½	35
256	Wheal Sophia	3½	10
1024	Wheal Spearne	1½	8
128	Wheal St. Ann	9	15
260	Wheal Trelawney	7½	112
256	Wh. Tremaine (St. Ervan)	1½	20
256	Wheal Tremayne	35	50
128	Wheal Trew	20	21
256	Wheal Trevenna	3	4
92	Wheal Tryphena	140	150
128	Wheal Venland	12½	10
127	Wheal Virgin	50	60
256	Wheal Vlow (Perrans.)	½	½
184	Wheal Vyvyan	—	60
1024	Wheal Walter	4	2
256	Wheal Williams	2	18
	FOREIGN MINES.		
5000	Alten Mining Company	14½	4½
15000	Asturian Mining Co.	9	5½
20000	Australian	2	6
10000	Anglo-Mexican Co.	100	1
12374	Ditto Subscription	25	2½
3000	Bolanos	150	6½
2000	Ditto Scrip	15	6
12000	Brazilian Imperial	20	2½
10000	Cobre Copper Co.	40	25½
8500	Colombian Co. regis.	55	4½
5000	Ditto Scrip	5½	
5000	Copiapo Mining Co.	14	3½
10000	General Mining Ass'n.	20	15½
5000	Kinzigthal Mining Ass.	2	3
20051	Mexican Company	89	—
2000	Mexican & South Amer.	7	3
5000	Mocaubas & Cocaes	25	5½
29320	Rl. del Monte, regis. / Ditto unregistered	28½	av. 3½
	Ditto Red Debentures	—	16
	Ditto Black ditto	—	14
	Ditto Loan Notes	150	97½
7000	Royal Santiago	10	5
2000	Pachuca Mines	4	4½
11000	St. John del Rey	15	7½
43174	United Mexican	26½	2½

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, MAY 7, 1847.

	£ s.	£ s. d.
Iron—Bar *a*, Wales...*ton*	0 0—	8 15 0
" ..London ..	0 0—	9 15 0
Nail rods "	0 0—	10 10 0
Hoop (Staf.) "	0 0—	11 15 0
Sheet "	0 0—	13 0 0
Bars " "	0 0—	11 5 0
Welsh cold-blast foundry pig *b*	4 10—	5 5 0
Scotch pig *b*, Clyde	3 5 0	3 7 6
Rails, average	9 0—	9 5 0
Russian, CCND *c* ..	0 0—	——
" PSI	0 0—	——
" Gouriieff	0 0—	——
" Archangel	0 0—13	10 0
Swedish *d*, on the spot	0 0—11	15 0
" Steel, fagt.	16 8—16	10 0
" " kegs *e*	15 0—15	5 0
Copper—Tile *f*	0 0—97	0 0
Tough cake	0 0—98	0 0
Best selected	0 0 101	0 0

	£ s.	£ s. d.
Copper—Ordin. sheets, *g*	0 0—	0 0 11
" bottoms .	0 0—	0 0 12
Yellow Metal Sheathing	0 0—	0 0 9½
Tin—Com. blocks *g—cwt.*	0 0—	4 15 0
" bars	0 0—	4 16 0
Refined	0 0—	4 18 0
Straits *h*	0 0—	4 10 0
Banca	4 14—	4 15 0
Tin-Plates—Ch., IC *i*, *box*	1 9—	1 11 0
" IX ...	1 15—	1 17 0
Coke, IC	0 0—	1 6 0
" IX	0 0—	1 12 0
Lead—Sheet *k* .....*ton*	0 0—19	10 0
Pig, refined	0 0—20	10 0
" common	0 0—18	15 0
" Spanish, in bd.	17 10—	——
Spelter—(Cake) *l* on spot	21 0—21	5 0
" " for arrival	0 0—21	10 0
Zinc—(Sheet) *m* export. *	0 0—	27 0 0
Quicksilver *n*	*lb.* 0 0—	0 4 6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto *e* In kegs ½ and ¼-inch. *f* Discount 3 per cent. *g* Ditto 3½ per cent. *h* Net cash in bond. *i* Discount 8 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

MONTHLY REPORT.

Iron.—Welsh and Staffordshire have been in very limited demand for some time past; and, although the prices are nominally unchanged, we consider them to be actually 5s. lower, and quote accordingly. Scotch pig has also looked down since last ult., but the business was languid until last week—during which, owing, it is said, to heavy payments falling due, several parcels were forced on the Glasgow market, and in some instances mixed Nos. were sold at 63s. 6d., cash down. Ordinary transactions fetched 2s. to 3s. per ton more—the quantity disposed of, is stated at 10,000 tons. Swedish and Russian are held firm at quotations; of the former, there is scarcely a parcel in first hands. Swedish steel has been in better request, and sales were made in past month at 15*l.*

Copper and Yellow Metal Sheathing remain unaltered as to prices, and the demand for each continues good.

Tin.—English was reduced 3s. per cwt. on 9th April. Stocks are still low, and the demand is fair. There is very little doing in foreign, and prices look heavy. Some sales of Straits have been made at 89s., and of Banca at 94s. and 95s.; the stock here of these two, on 1st inst., was 311 tons; and Amsterdam and Rotterdam 166,627 slabs, or 4938 tons, of Banca.

Tin-Plates not much in demand for the last two months, but prices are tolerably firm.

Lead.—Prices are firmly maintained, even without export orders. Stocks of all descriptions are very low; there is no American or soft Spanish either here or in Liverpool.

Spelter.—A large business was done in past month, chiefly for arrival; and, although some purchases can be made at our quotations, most of the holders demand from 10s. to 15s. more. The present stock is 1170 tons.

[From a Correspondent.]

Iron, both Welsh and Staffordshire, have been little inquired for during the month; and, although prices are quoted similar to last month, holders would willingly sell some descriptions at 5s. to 7s. 6d. per ton under present quotations. Rails have been in fair demand, at prices varying from 8*l.* 17s. 6d. to 9*l.* 10s. per ton in Wales, according to section. Scotch pig-iron has experienced a decline of 5s. to 7s. per ton since last month, owing to some large parcels having been forced on the market by the Glasgow Banks, who had advanced money to the speculators. Within the last fortnight about 12,000 tons changed hands, at prices varying from 70s. to 63s. for mixed Nos., delivered at Glasgow. Swedish Iron and Steel continue very firm, and the stocks rather small.

English Copper is held firm, and a fair business doing, principally for the home trade.

Tin.—English has fallen 3*l.* per ton during the month, with every prospect of a further decline. Banca has drooped from 100s. to 98s.; and Straits has been sold as low as 89s., but holders are now asking 91s.

Tin Plates are exceedingly dull, and lower prices would be submitted to for good orders.

English Pig-Lead is firm at quotations. Of Spanish and American there is no stock.

Spelter.—This article has been in good demand during the month, at 20*l.* per ton for May and June shipment from the Baltic, and 21*l.* on the spot; holders are very firm and looking for higher prices, owing to the reduced stock here, which is now only 1170 tons.

GLASGOW PIG-IRON TRADE, May 4.—The slight improvement which took place in the money market, beginning of the week, was followed by a corresponding improvement in pig-iron; it was but for a day however, and we are now in much the same state as at the date of our last advices. Several transactions took place yesterday at 66s. 6d. for mixed Nos., cash; and to-day at 66s.

SILVER-LEAD ORE.

Tenders for (computed) 100 tons, from the Callington Mine, *were opened at the Offices, Finsbury-square, on the 5th March, 1847.*

Firms.	Price per Ton.
B. Somers, Esq.—Bristol	£20 11 0
Mullins, Brothers, & Co.—London	20 2 6
J. T. Treffry, Esq.—Cornwall	19 2 6
Walker and Co.—Wales	18 18 0
Tamar Smelting Company—Devon	18 12 0
R. Michell and Son.—Cornwall	18 7 6
Mather and Co.—Wales	18 3 0
Newton and Co.—ditto	17 2 0
Combmartin Smelting Company—Devon	Nil.

LEAD ORES

Sold at Holywell, 28th April, 1847.

Mines.	Tons.	Price.	Purchasers.
Cwmystwith	50	£10 12 0	Newton, Keates, & Co.

Sold at the Mines, on the 30th April, 1847.

East Wheal Rose	53	£14 8 6	Penpoll Company.
ditto	53	14 8 6	Michell and Son.
ditto	51	14 13 6	ditto
ditto	51	14 13 6	Penpoll Company.
ditto	67	13 0 0	B. Somers.
ditto	65	12 15 0	ditto
ditto	15	6 6 6	Penpoll Company
ditto	15	6 6 6	Michell and Son.
Wheal Trehane	45	£19 3 0	Tamar Smelting Co.

BLACK TIN

Sold at the Mine, on the 28th April, 1847.

Mines.	Tons.	Price.	Purchasers.
Drake Walls	3½	£49 0 0	Danbux.
ditto	3½	49 0 0	Bolitho and Co.
ditto	3	53 10 0	ditto
ditto	3	53 10 0	Williams and Co.
ditto	2	37 10 0	ditto
ditto	1½	30 0 0	Bolitho and Co.
ditto	1	50 0 0	ditto
ditto	1	30 0 0	ditto
ditto	1	48 0 0	Danbux.
ditto	6 cwts.	3 10 0	Bolitho and Co.
	Total amount		£886 6s. 0d.

COPPER ORES

Sampled April 21, and Sold at Tyack's Hotel, May 6, 1847.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
North Roskear	119	£4 19 0	Tincroft	44	£6 13 0
ditto	116	5 7 6	ditto	24	2 2 0
ditto	111	7 10 6	ditto	20	1 16 6
ditto	105	7 15 6	Wh. Seton	124	6 0 6
ditto	96	5 4 0	ditto	94	4 16 0
ditto	95	7 6 0	ditto	80	6 18 0
ditto	93	5 8 6	ditto	79	4 16 6
ditto	83	5 9 6	Fowey Consols	88	6 3 0
ditto	81	6 14 6	ditto	69	7 5 6
ditto	66	6 0 6	ditto	62	2 14 0
ditto	55	6 12 0	ditto	57	4 4 6
Consolidated	85	5 9 6	South Wh. Francis	99	16 9 6
ditto	84	7 9 0	ditto	73	2 19 0
ditto	75	4 0 6	ditto	19	22 1 0
ditto	74	8 15 6	Wh. Bucketts	75	4 3 6
ditto	73	8 4 0	ditto	33	5 16

NOTICES TO CORRESPONDENTS.

Lisburne Consols.—Our attention has not only been directed to an article which appeared in the *Morning Herald* of the 5th inst., but we have received a communication from Mr. Andrew Smith, C.E., on the subject. The press of matter precludes our notice of the subject, and which now, from the late period at which such came under notice, must necessarily be deferred. Mr. A Smith may have his redress in a court of law; but we consider an explanation will afford him all that he may require.

North Wales Mining Company.—We have received a report on the mines possessed by this company, and its prospects, but which we must necessarily defer until our next, from the length of our mining correspondence and reports of meetings.

Wheal Grace.—Our want of space precludes insertion of a report of the setting the engine to work; but which shall appear in our next.

THE MINING JOURNAL.

Railway and Commercial Gazette.

LONDON, MAY 8, 1847.

The great length and importance of our Mining News, including the annual report of the Great Wheal Maria, detailing its extraordinary results, compels us to omit much interesting matter;—Leading articles on the Wheal Maria Mines, on Colliery Workings, &c., are also postponed.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

The attention of the mining world in particular, and of the public at large, is at this moment fixed on a somewhat remarkable case, now pending before the Civil Tribunal of the Seine. M. Parmantier, one of the principal shareholders in the mines (coal and salt) of Gouhenans, in the arrondissement of Lure, department of the Haute Saône, has brought an action against General Despans Cubières, pier of France, formerly Minister of War, and against several other persons, to compel them to deposit 1,200,000 fr. (4800*l.*) in the hands of the bankers of the company for certain shares, for which they had subscribed, on the reconstitution of the company in 1846, with a capital of 6,000,000 fr. The defendants' answer to the action is, that they were unable to pay up the price of the shares—that is really the whole case on which the Tribunal has to decide; but it derives its interest from there having been read a certain number of letters, written in 1842, by General de Cubières to M. Parmantier, in which it is clearly and distinctly said, that in order to obtain the concession of the mines from Government, it would be necessary *to give shares for nothing* to the Government functionaries, and, at least, to give 45 shares to the Minister of Public Works, he having demanded 80! In plain English, this meant that the company would not get its concession, unless it corrupted the Minister of Public Works, and some of his subordinates. The shares were issued at 1000*l.* each, and at first were worth that price in the market—so that the company was positively asked to make a sacrifice equal to 80,000*l.*, and one of its principal members was actually prepared to give 45,000*l.* It is fair to state, that the Minister of Public Works, who is accused (it is the late Minister who is referred to—not the present, M. Dumon), has given a direct denial to the accusation. The Chamber of Deputies has taken the matter up with great warmth, and the Government is said to be determined to examine fully into the affair, and bring the wrong doers to justice. The first step, it is believed, will be to prosecute General Cubières for calumny, leaving him to make out his case if he can. Meanwhile, one of two things is certain—either the Minister of Public Works *was* bribed by General de Cubières, on behalf of the company, and, if so, he deserves to be brought to trial; or General de Cubières deceived the company, in obtaining shares, on the pretence of giving *them* to the Minister, and in that case the general is a slanderer and (it is well to speak plainly) a swindler. Opinions must be suspended until more information shall be obtained on the subject; but enough has already come to light, to prove that there are strange doings in France, and that peers of France, and ex-ministers, are sometimes very queer people.

The Committee on the new Customs' Bill pursues its task of examining its various provisions. As I foresaw, almost all the discussion turns on the clauses relative to the admission of iron for shipbuilding. The ironmasters have been before the committee, and have told their tale in their own way, which, of course, means that they have crammed the committee with an awful mass of mis-statements. M. Leon Faucher, and some of the directors of the Northern, Lyons, and Orleans Railways, have also been examined; and have ably exposed the iniquitous nature of the iron monopoly. The committee, it appears, is going into the whole question of the iron duties, instead of confining itself especially to those on sheet-iron. Few things would be more desirable; but it is feared that, under the apparent desire for information, the committee is endeavouring to play the game of the ironmasters, by creating such delay as will render the postponement of the bill for another year totally inevitable. The *Siecle* states, that a few days ago, the committee sent for some of the ironmasters, and some of the adversaries of their monopoly, and asked them to discuss, in their presence, the question between themselves. "The discussion (says your contemporary) lasted four hours; and was principally on the situation and production of the French iron establishments, with respect to railways. The ironmasters did not attempt to deny their past and present powerlessness to meet the supply; but they gave a new edition of the magnificent promises which M. Thiers made in their name in 1835, when he asked for four years' patience—four years! and we have given 12. When M. Leon Faucher proved the flagrant and permanent coalition of the ironmasters—a coalition which enables them to control prices, and to fulfil, or not to fulfil, their engagements—no answer whatever was attempted on behalf of the ironmasters. Altogether, the result of the days' discussion was not at all in their favour."

You would have some difficulty to form an idea of the alarm which the ironmasters feel at the prospect of the iron duties being altered, even to the very small extent of admitting sheet-iron, which they cannot fabricate. They consider it—to use a hackneid phrase—as the small point of the wedge, which will be driven further and further in, until the whole odious monopoly shall be shattered to pieces. I had the misfortune, last evening, to meet one of the tribe—the possessor of a small furnace. The poor man was overflowing with indignation against the Government bill; and so senseless was his wrath, that he actually accused the French Ministers of having been paid by the English Government to bring it forward! Of the *Mining Journal* he spoke in terms of towering indignation, declaring it abominable for a foreign paper to presume to meddle in a question exclusively French. He knew, he said, most positively, that everybody connected with your paper, from proprietors down to printers' devils, has been corrupted by the English Cabinet to attack the iron monopoly; and he made no secret of his belief, that if everyone on the establishment were to be suspended by the neck for an hour, he would have no more than he merits.

Each of the 450-horse power machines of the four steamers given up by the Goverment, for the establishment of a regular line of communication between New York and Havre, cost 32,000*l.*, and weigh 650 tons; but, if bought in England, the price would have been only 18,000*l.*, and the weight 450 tons.

The official *procés verbal* of the Municipal Council of St. Etienne, authorising the mayor to take measures for prosecuting the great coal companies of the Loire for coalition and amalgamation, has lately been published, but it contains nothing that was not communicated to the *Mining Journal* several weeks ago. The number of concessions, united into one concern' is about 60.

A company has been formed at Tours, for working a patent for the manufacture of tubes. Great part of the capital is held by Englishmen.

Belgium.—The coalowners of Mons and the neighbourhood are in anything but a prosperous state. The demand for coal has fallen off very considerably, and the extraction of it has increased very greatly—the consequence is, that prices are deplorably low. There is a great deal of rivalry and ill-will between the owners of the coal-pits of the Mons districts; and this prevents them from acting cordially together in the promotion of their common interests. Under the spur, however, of their present awakened situation, they have adopted a resolution to limit the extraction in their respective pits, until the stock on hand shall be reduced. An attempt was made by some of the wiser men to bring the whole body to an agreement, with respect to the selling price of coal, and to the amount of wages to be paid the miners; but, after some deliberation, it failed, every one being unwilling to sacrifice any portion of his own petty interests, or fancied interests, to the general good. Four years ago all the coalowners of the district entered into an agreement, after a great deal of very troublesome negotiation, to limit the extraction of coal in each pit, and to fix a price, below which none should be allowed to be. The arrangement was made for three years certain, and during that time it answered admirably, in promoting the interests of the company. But, as the termination of it drew nigh, first one violated its provisions, then another, then another, and so on, until all did just as they pleased. Then came an excessive production of coal, which glutted the market, and an excessive competition, which brought down prices below a remunerating figure. To such an extent was competition carried on, that each company and proprietor had travellers, who were charged to find out the prices any purchaser might have agreed to give to any of them, and immediately to offer, no matter how low they might be, to supply at a lower figure. It is to be hoped that the lesson the coalowners have received, and are now receiving, will prevent a repetition of such foolish, and, it may be added, such not very creditable, proceedings.

A comparison has been made between the exportations of England and Belgium. The two articles which interest your readers, stand as follows:—1845, England, exportation of iron, 87,500,000 fr.; Belgium, 11,400,000 fr.—1846, England, 104,500,000 fr.; Belgium, 13,500,000 fr.. Exportation of machines in 1845, England, 22,500,000 fr.; Belgium, 5,000,000 fr.—in 1846, England, 29,000,000 fr.; Belgium, 4,000,000 fr. It thus appears, that in proportion to its population and extent, Belgium exports more than England; but that its exportations have not increased in the same proportion as those of our country.

The Chamber of Representatives has refused an increase of 12,000,000 fr. in the vote for mines, which was requested by the Minister of Public Works.

The subjoined statement, of the nominal and present value of shares in some of the principal coal and iron companies of this country—such of them, that is, as are quoted at the Bourse—is not without interest:—Mines et Fonderies of the Vieille Montagne, 1000 fr. shares, 5 per cent. interest, present value about 5850 fr.; Société des Hauts Fourneaux, 1000 fr. shares, 5 per cent. interest, present value about 780*l.*; Charbonnages of Flenu, shares 1000 fr., interest 5 per cent., value 1225 fr.; Charbonnages of Hornu and Wasures, shares 1000 fr., interest 5 per cent., value 850 fr.; Charbonnages of Sclessin, shares 1000 fr., interest 5 per cent., value 1260 fr.; Hauts Fourneaux de Monceaux, shares 1000 fr., interest 5 per cent., value 1980 fr.; Lit de fer, shares 3000 fr., interest 5 per cent., value 3300 fr.; Hauts Fourneaux de l'Esperance, shares 1000 fr., interest 5 per cent., value 1225 fr.; Charbonnages of Sars Long Champs, shares 1000 fr., interest 5 per cent., value 1050 fr.; Charbonnages et Hauts Fourneaux d'Ougree, shares 1000 fr., interest 5 per cent., value 850 fr.; Charbonnages du Levant du Flenu, shares 1000 fr., interest 5 per cent., value 1200 fr. The statement of the present value of the shares may not be exact to a franc, but it is quite near enough to enable your readers to form an idea of the price of the shares in the market. There are some metallurgic establishments, whose shares never—or, at least, very rarely—come into the market, that are even more profitable to their proprietors than any of the above.—*Brussels, Tuesday.*

GUN-COTTON—IMPORTANT EXPERIMENTS.

We are indebted to Messrs. John Hall and Sons, of Lombard-street, for the following copies of letters received from their agent, Mr. John F. Wheeler, giving details of further and most satisfactory experiments in blasting, with this new and wonderful power. The statements are so explanatory in themselves, as to require no comment from us:—

"Gentlemen,—I beg to inclose you my report on blasting, with the patent gun-cotton, at the Holyhead Mountain, Anglesea; the Holland Slate Quarry, Festiniog, Merionethshire; and at the Hon. Col. Pennant's slate quarries, Penrhyn, near Bangor, Carnarvonshire. The experiments at Holyhead, were made in the presence of Capts. Vidal, Collinson, and Shepherd, commissioners from the Admiralty; Mr. Beardmore, Mr. Dobson, Mr. Lister, and Mr. Clifford, engineers; and several gentlemen interested in the matter.

The rock upon which these experiments were made is exceedingly hard, of a metamorphic character, mica and chlorite slate, with quartz.

The results gave the most convincing proofs of the vast superiority of the patent gun-cotton over gunpowder, which was acknowledged by all the gentlemen present. The gunpowder used in these experiments was *the best Ordnance gunpowder*. The next series of experiments were made at the Holland Quarry, Festiniog, Merionethshire, in the presence of Mr. S. Holland, jun., Mr. H. Stock, of Port Madoc; Mr. C. Spooner, Port Madoc; Mr. R. Jarrett, Festiniog; Mr. R. Lloyd, Festiniog; Mr. Searle, of Carnarthen; Mr. Chisel, of the Welsh Slate Company; Mr. Owen Pritchard, of Messrs Matthews and Sons; Mr. Owen Jones, of Messrs Shelton and Greaves; Mr. Hughes, of Messrs. Casson and Co.; Mr. Selwyn, Mr. Hill, and other gentlemen.

The first of the experiments tried in this quarry, were made upon an extremely hard calcareous stone, the others upon the slate; the admirable manner in which the slate was removed from its bed by the patent gun-cotton, elicited the most general satisfaction, and gave incontestible proof of its suitability in blasting slate, being far superior to gunpowder—the pieces removed by the cotton were large valuable masses. The last experiments made were in the slate quarries at Penrhyn: there were present at these Mr. Wyatt, Mr. Frances, Dr. Roberts, and others. The wonderful effect produced by the cotton was, you will find by reference to the tabular form, more astounding than any hitherto tried: the huge mass of 60 tons weight was gently pushed from its firmly bound bed, by the explosion of only 8 ozs. of cotton; no splintering of the slate took place, which greatly astonished the workmen, many of whom expressed that the danger was far less by its use than gunpowder. The gentlemen present acknowledged the superiority of gun-cotton over gunpowder, to be in ordinary slate work, in the proportion of six or seven to one, and in hard rock to be four and five to one. Some other experiments were tried by me at Fridd Issa Quarry, about two-thirds up the Snowdon Mountain, with similar good success.

Bangor, May 5. J. F. Wheeler.

Experiments made in Blasting with Gun-Cotton in the Slate Quarries of the Hon. Colonel Pennant, at Penrhyn, near Bangor, Carnarvonshire.

No. of Expt.	Depth of Hole. Ft. In.	Diam. of Hole. Inches.	Quantity of Gun-cotton used. Ounces.		Quan. of Slate Removed. Tons.	Gunpowder required to do the same work.	
1	4 2	1½	8	tube	30	40 ozs.	(1)
2	6 5	1½	8	tube	60	48 ozs.	(2)
3	8 0	1	8	loose	60	48 ozs.	(3)
4	4 0	1½	3	loose	8	24 ozs.	(4)

The results of the above experiments were considered admirable by every one present—producing just the effect so much desired in slate quarrying.

REMARKS.

(1.) In red slate, commonly called by the men "granite," owing to its great hardness.
(2.) Hole driven in horisontally—the whole mass gently forced from its bed, just as required by the quarrymen.
(3.) Hole in a similar position, and the result equally good.
(4.) This "shot" being in a very fast place, ought to have had 1 oz. more of cotton.

Experiments made in Blasting with Gun-Cotton and Gunpowder at Mr. Holland's Slate Quarry, Festiniog, Merionethshire.

Depth of Hole. Ft. In.	Diam. of Hole. Inches.	Dist. of Hole from face of rock Ft. In.	Weight of Powder. Ounces.	Weight of Cotton. Ounces.	Weight of Stone removed. Tons.	
2 3	1½	2 0	—	tube, 4 oz.	—	(1)
2 3	1½	3 0	16	—	2½	
2 2	1½	3 0	—	tube, 4 oz.	3	
The above experiments were made upon an exceedingly hard calcareous stone.						
3 6	½	3 6	—	2 ozs.	—	(2)
2 0	½	1 4	6	—	—	(3)
2 1	½	2 6	—	1½ ozs.	2½	(4)
5 0	½	5 6	—	3½ ozs.	9	(5)
2 0	½	5 0	—	2 ozs.	—	(6)
2 6	½	4 6	—	—	4½	(7)

REMARKS.

(1.) In stemming down the fuse was cut. The stemming drawn out and cotton fixed; split the stone 4 feet down.
(2.) The slate cracked, but not removed.
(3.) Did not fire—"smoked."
(4.) This was in a fast place—removed the slate in a fine piece.
(5.) Removed in fine and valuable pieces.
(6.) Removed from its bed in fine large pieces.
(7.) Shattered, and thrown about in useless pieces.

Experiments made in Blasting with Gunpowder and Gun-Cotton on the Holyhead Mountain.

Depth of hole. Ft. In.	Diam. of Hole. In.	Dist. of hole from face of rock. Ft. In.	Weight of powder used Ounces.	Weight of cotton used. Ounces.	Weight of stone removed. Tons.	
4 0	1½	3 6	40	—	18	(1)
4 6	1½	4 6	40	—	19	(2)
4 0	1½	4 0	—	paper tube, 8 ozs.	17	(3)
4 6	1½	6 0	40	—	16	
3 1	1½	5 0	—	loose, 10 ozs.	17½	
3 1	1½	4 0	—	tube, 6 ozs.	9	
3 1	1½	4 0	—	tube, 6 ozs.	8	
3 6	1½	3 6	16	—	2	
3 8	1½	3 0	—	tube, 6 ozs.	—	(4)
3 0	1½	3 0	—	—	2½	

The character of the rock is metamorphic—a micha and chlorite slate, exceedingly hard, but much ruptured.

REMARKS.

(1.) Much broken, and thrown from the face.
(2.) Not so much broken, but easily removed.
(3.) Removed in large blocks—one weighed 2½ tons.
(4.) Not weighed.

J. F. Wheeler."

NEW PATENTS.

J. Taylor, Tipton, Staffordshire, for a certain improvement or improvements in the construction and manufacture of wheels for railway and other carriages.

G. Stow, King-Street, Cheapside, for improvements in the construction of steam-vessels, and in apparatus for propelling ships and other vessels.

W. Henwood, Portsea, for improvements in propelling vessels, and in steering vessels.

C. H. Greenhow, North Shields, for improvements in the construction of ships or vessels, and in propelling ships and vessels.

M. Poole, for improvements in apparatus for connecting and disconnecting railway carriages.

H. Spencer, Lloyd-st., Clerkenwell, for improvements in machinery for planing and sawing wood, part of which are applicable to machinery for cutting certain other substances.

J. G. Seyrig, New Lenton, Nottingham, for improvements in propelling on land and water.

C. Fox, Trafalgar-square, Charing-cross, and J. C. Haddan, Upper Woburn-place, for improvements in railway chairs and switches, in trenails or fastenings, and in machinery for preparing railway sleepers.

Anglo-Mexican Mine Company.—At the annual general meeting of proprietors, held at the offices, on Tuesday last, a report was presented, from which it appeared, that whatever mischief the war with the United States may have done to Mexico, the mining industry of the country has not suffered. The company holds two mints in the interior—those of Guanaxuato and Zacatecas—and the amount cleared at these in the year ending Dec. 31, 1845, was $6,738,278; and in 1846, $9,027,881. A half-yearly dividend was declared of 15s. per share.

Cradock Moor.—A meeting of adventurers was held at Liskeard, on the 26th April, when the accounts for January and February were presented showing balance against adventurers of 54*l.* 13s. 8d.—They were allowed and passed, and a call of 1*l.* per share made, payable at the Devon and Cornwall Bank. The following report, from Capt. H. Taylor, was read to the meeting:—Our operations are still confined to the sinking of the north shaft, which, since our last report, has been sunk 3 fms.—it is now 91 fms. deep; the lode on it is about 7 in. wide, with a leader of fluor-spar and ore, about 3 in. wide, of good quality, and extending the whole length of the shaft. This lode, which has hitherto maintained an underlie of 2 ft. 9 in. per fm., has lately changed its course, and is now nearly vertical. This change I consider a very good indication, taken in connection with the very promising character of the lode. In the last report, it was recommended to the shareholders to sink this shaft to the depth of 85 fms., and then drive east through the cross-course, where the lode, it was stated, had a more promising appearance. In that recommendation I concur: and I also recommend at that depth the driving of cross-cuts to cut the parallel lodes, provided the ground is favourable for driving. It will require about three months to sink the shaft the 4 fms. to the 35.

Gonamena.—A meeting of adventurers was held at Liskeard, on the 29th April, when the accounts for January and February were presented, showing balance against mine of 103*l.* 18s. 8d.—they were allowed and passed, and a call of 2*l.* per share made, payable at the Devon and Cornwall Bank. The following report from Capt. J. Buzza, was read to the meeting:—The winze in the 20 fm. level, on the north lode east, sinking to the 34, is down 8 fms.—the lode 2 ft. big, composed of peach, spar, and capel; it will come down about 6 fms. before the present end. The west end, in the 34, on the north lode, is 18 in. big, composed of mundic, spar, and capel—4 in. saying work for ore. The east end on the north lode, in the 34, is 2 ft. big, 15 in. of which are very good—worth from 20*l.* to 25*l.* per fm. for the last 4 fms. The Bridge lode is 30 fms. south of the north lode in the 34, which we have discovered driving the south cross-cut; the lode west is 6 in. big, of spar and ore; the lode east is from 4 to 6 in big—ground hard, spotted with ore. The cross-cut is 8 fms. south of the Bridge lode. We expect to cut another lode in 5 or 6 fms. more driving. The engine-shaft is sunk under the 34 from 7 to 8 fms., sinking by nine men—the ground hard. The east adit is driven 100 fms. north. No lode of consequence has been cut since last meeting.

South Yeoland.—A meeting of adventurers was held at Liskeard, on the 29th April, when the accounts for January and February were presented—showing balance in favour of mine, 53*l.* 0s. 4d.—which were allowed and passed. A call of 10s. per share was made—payable upon 112 shares, 16 having resigned.—It was resolved, that "C. Fox, R. Barclay Fox,, and J. C. Isaac, with the purser, be requested to make any arrangements they may think proper with Tokenbury adventurers, relative to the driving Tokenbury deepest level into Yeoland Consols, to intersect G. lode."—The following report of Yeoland Consols, from Capt. T. Trelease, was read to the meeting:—In consequence of not having a full supply of surface water to drive the pressure engine, so as to keep the mine drained at bottom, our operations for the present two months have been confined to the driving of the 30 fm. level west on old G lode. The extreme point of this level is 51 fms. west from Croker's shaft, and the lode in the present end about 2 ft. wide, consisting of peach, spar, mundic, &c.—its course and underlie are both regular and uniform; and notwithstanding its being now poor and unproductive of much ores, yet, from its appearance and situation, I recommend the continuance of the 30 level, having now nearly 60 fms. of back, and which will be added to in its progress west, as we proceed into the unexplored piece of ground towards East Caradon.

Tokenbury.—A meeting of adventurers was held at Liskeard, on the 29th April, when the accounts for Jan. and Feb. were presented, showing balance against mine of 27*l.* 1s.—they were allowed and passed, and a call of 2*l.* per share made on 100 shares, 28 having been relinquished. The following report from Capt. T. Trelease was read to the meeting:—The 65 fm. level, at Crouch's shaft, is driven south on Browning's cross-course about 75 fms.; at 7 fms. behind the present end, a lode was intersected, but we are uncertain whether it be D lode or not; it is extended on west from the above cross-course about 7 fms., in this distance the average width of the lode is 4 ft., and (as might be expected so near the cross-course) it is rather in a broken up and confused state, consisting of quartz, peach, mundic, gossans, granite, and spots of yellow copper ores. We are continuing the cross-cut, to ascertain whether the above lode be D, or E, and it can afterward be carried on to intersect C, B, and A lodes (two of them very promising at the adit), and this will enable us to see them 65 fms. deeper. There are two pitches working on E 3 lode—viz.: one in the bottom of the 42 fm. level, and the other in the back of the 12 fm. level; the former at 14s. in 20s. and the latter at 13s. 4d. in 20s. There is also a pitch working on E lode, in the back of the 20 fm. level, at 13s. 4d.; and I judge from the ores raising, that the men are getting fair wages. The ore appears to be going down under the 20, and it will be desirable to bring on the 65 level to this point as soon as possible.

West Caradon.—A statement of accounts for January and February shows the amount received for ores sold (less lords' dues, 383*l.* 5s.), 5750*l.* 16s. 9d.; materials sold, 21*l.* 2s. 2d.; balance from last account, 1644*l.* 15s. 6d.—7416*l.* 14s. 5d.—The general expenses for the two months had been 3793*l.* 5s. 7d.: showing profit of 1978*l.* 18s. 4d. A dividend of 3*l.* 10s. per share was declared, and a balance of 2727*l.* 8s. 10d. in favour of mine carried on.

Wheal Fortescue.—At a meeting of adventurers, held at Tavistock, on the 29th April,—Richard Taylor, Esq., in the chair,—the accounts and vouchers for Jan., Feb., and March, were examined and passed, showing balance due from adventurers of 244*l.* 0s. 3d. A call of 2*l.* per share was made; the recommendation in the captain's report ordered to be carried out; and the best information directed to be obtained as to Capelton Mine, the character of the lode and quantity of water, with a view to the clearing up of this mine, by virtue of the present engine, in case the result of these inquiries should be such as would recommend its being done; and that, in this case, the agents be authorized to proceed with the work.—The following report, from Capts. S. Seccombe and John Key, was read to the meeting:—Since the last meeting, held on the 3d Feb., only 3½ fms. have been sunk in the engine-shaft; the influx of water being so great, we were under the necessity of suspending all further operations until the water-wheel was set to work, the quantity of water being too much to be drained by horse-power. Although the contractor promised at the last meeting that the water-wheel should be completed in a fortnight from that day, yet it was not finished until the evening of the 19th April, since which the shaft has been divided, ladders put in, and other preparatory work required previous to the sinking being resumed. This work is nearly completed, and the sinking will be commenced to-morrow morning. There are 4 fms. more to sink, previous to our driving a cross-cut north to intersect the Wheal Maria lode, which we calculate will be done in two months, judging from the present favourable character of the ground. The new wheel appears to be a very good one, and works well, and is of sufficient power to give this part of the sett an effectual trial.

Wheal Hope.—A meeting of adventurers was held at Liskeard, on the 29th April, when the accounts for January and February were presented, showing balance in favour of mine, 23*l.* 10s. 7d.—they were allowed and passed, and a call of 1*l.* per share made, on 100 shares, nine having been relinquished. The purser was directed to take such steps as may be necessary, legal or otherwise, to recover payment of arrears of calls from two adventurers, owing together 29*l.* The following report from Capt. W. Taylor was read to the meeting:—Since our last report we have extended our bottom level east on the old lode about 7 fms., the lode is of much the same size as when we reported last; the part we have taken down looks very kindly—it consists of spots of grey and yellow copper ore, quartz, mundic, and iron; this end we expect will, in a few fathoms further driving, come into the killas strata (where we hope to have an alteration in the lode), and will also intersect a north and south lode (on which we found stones of ore in the adit level): there are, indeed, indications of our being very near it. The "horse" lode has been extended on about 5 or 6 fms. since our last report; this lode is still small (about 6 in. wide), and composed of rich spots of grey copper ore, mundic, and kindly gossan. The end thus extending south on the course of the lode will, we expect, in 8 or 9 fms. further driving, intersect an east and west lode, which has been driven on in another part of the sett, and rich stones of ore found in it in several places.—P.S. Since I wrote this report, I have been underground, and brought up from the "horse" lode, a good stone of grey ore. It is a very kindly little lode; and I do think, if we can intersect that other lode, we shall have copper there.

Wheal Mary.—A meeting of adventurers was held at Liskeard, on the 29th April, when the accounts for January and February were presented, showing balance against mine of 37*4l.* 8s. 6d.—They were allowed and passed, and a call of 4*l.* per share made—The draft lease presented—viz., from John Gedye and John Gedye, jun., to John Allen, John Eliott, and Edward A. Crouch, of the tenements of Newhouse, Quarry, and Jericho, in St. Neot, situate between Wheal Sisters and the north part of Wheal Mary Consols—was approved; the sett being taken on behalf of Wheal Mary Consols adventurers. Messrs. John Allen, John Eliott, and Charles Fox, were requested to assist the purser in making arrangements for the supply, after Midsummer, of the principal articles required for the use of the mine; and either by the usual mode of contract, or any other that may appear more desirable.—The following report, from Capt. J. Nance, was read to the meeting:—During the last two months our operations have been confined, as formerly, to driving the 80 and 50 fm. levels west on the old lode, and extending the cross-cuts towards the side lodes. Our progress in driving the 80 has been rather slow, in consequence of the badness of the air; we have, however, obviated this difficulty by attaching an air machine to the engine-rod, and intend communicating with the 70 above by means of a rise or winze, which, when finished, will ventilate this level, and lay open ground for stoping. The lode at present in this end is 20 in. wide, containing both tin and copper, worth 10*l.* per fm.; should it maintain its present promising character, we shall soon be in a position to make some returns. The lode in the 50 end is at present poor. The south lode has not been extended on since last report. The 50 cross-cut, driving south, is now extended

52 fms. towards the south lode, leaving about 8 fms. more to intersect it. The cross-cut being 25 fms deeper, and directly under where the course of ore is going down in the 25 level (worth 28*l.* per fm.), causes some degree of anxiety to reach the lode at this point; and should the course of ore hold down, it will repay the shareholders for their spirited outlay and perseverance. The 25 fm. level cross-cut south from count-house shaft, is extended towards the same lode 50 fms., leaving 12 fms. more to drive to intersect it. The 70 cross-cut is extended towards the north lode 56 fms., leaving (in consequence of the different dip and bearing of the two lodes) 18 fms. more to drive. The ground in this cross-cut is still hard, but as it approaches the lode we may expect it to become softer. The 25 fm. cross-cut is extended towards the same lode 61 fms., leaving about 7 fms. more to intersect it. We are now sinking a new shaft in the eastern part of the sett, to explore the new lode mentioned in the last report. The ground is favourable for sinking; and as it is drained by Wheal Sisters Mine, we recommend sinking it to the depth of 35 fms. (or 14 fms. deeper than it is at present), before driving another level. The lode in the 14 fm. level is composed of capel (which contains tin), and bunches of gossan, impregnated with copper ore and mundic. We believe it will be found productive of copper if explored in depth. The new stamps will be completed in about a fortnight, when we shall begin to prepare to make some return of tin.

WHEAL RODINS.—At a meeting of shareholders, held at Webb's Hotel, Liskeard, on Friday, the 23d April—JOHN HICKS, Esq., in the chair,—the opinion of Mr. Stokes, as to the rights of shareholders to certain shares claimed by them in this mine, having been submitted, Mr. R. Bishop, with Mr. Stokes, were instructed to take proceedings in the Stannary Court, for the recovery of such shares, and to act in the matter generally as advised by Mr. Stokes.

WHEAL SISTERS.—A meeting of adventurers was held at Liskeard, on the 29th April, when the accounts were presented, showing amount received for copper ore, 2620*l.* 7*s.* 3*d.*—Labour cost for Jan. and Feb., 952*l.* 8*s.* 3*d.*; materials 257*l.* 12*s.* 6*d.*; lords' dues, 164*l.* 0*s.* 2*d.*; balance of last account, 158*l.* 13*s.* 11*d.*: leaving balance in favour of mine, 1092*l.* 12*s.* 5*d.*—A dividend of 2*l.* per share was declared; and the offer of Mr. W. Glencross, to grant a license (a lease for 21 years to be executed at a future time) of ground eastward from Ambush Lake, as an addition to Wheal Sisters sett, with leave to sink a shaft near the junction of Ambush Lake and Wenmouth Estate, on paying the value of the land required for said shaft and rubbish from it, was accepted. Messrs. J. Allen, J. Eliott, C. Fox, and S. Abbott, be requested to assist the purser in making arrangements for the supply, after Midsummer, of the principal articles required for the use of the mine; and either by the usual mode of contract, or any other that may appear more desirable.—The following report from the mine was read to the meeting:—The engine-shaft is now down about 4 fms. under the 60 fm. level, and we expect it will be completed to the 70 in about six or seven weeks from this time; the shaftmen have contracted for the 10 fms. at 13*l.* per fm. The 60 fm. level is extended west to within about 4 fms., to come under the point where the course of ore was first cut in driving the 50; the lode in the 60 end is at present poor, and much the same appearance as in the 50 directly over it; the lode in the eastern end at this level is in two parts—the north part 3 ft., and the south 1½ ft. in width, both containing a small portion of ore; these branches are dipping towards each other, and will, I have no doubt, form a junction at or about the 70. The 50 fm. level west is now extended to within 22 fms. of the boundary of Wheal Mary Consols sett. There is a branch of ore in the end 10 in. wide, which will yield about 1½ ton of ore per fm.; the stopes in the back, to the west of the great cross-course, are yielding about 2 tons per fm.; the lode in the 50 end east is 4 ft. wide, with a small portion of ore in it; the stopes in the back of this level, to the east of the great cross-course, are now set on tribute at 6*s.* 8*d.* and 8*s.* 6*d.*; we have also in this level four other pitches—two at 12*s.*, and two at 13*s.* 4*d.* The 40 end east is suspended for the present, and the men employed in clearing some stuff in the western end, to prepare for driving the 40 west of the cross-course towards the point over the bunch of ore in the 50; we have also four pitches working in the back of this level, at the respective tributes of 11*s.* 6*d.*, 12*s.*, 12*s.*, 13*s.* 4*d.* On the north lode we are driving the 20 fm. level west from the engine-shaft towards the great cross-course, which will be parallel to the course of ore on the south lode, where we may reasonably expect an improvement; the ground is favourable for driving, and we hope to reach it in about three months.

WHEAL MARY MINE, LANIVET.

SIR,—Can any of your readers inform me what has become of the promising mine called Wheal Mary, in the parish of Lanivet, Cornwall? Was this mine one of the bubbles of 1845, or are not the parties largely interested in her willing to adventure their capital to work her?

I took an interest in the concern, understanding that she would be effectually worked; and, from the reports I have now seen, I am at a loss to know why she is suspended. I am unwilling to think this was a bubble scheme, believing, that respectable mine agents would not allow their names to be placed to such high-coloured reports as have appeared, without due consideration, and that some gentlemen holding a large interest, would not lend their support to uphold what they knew to be wrong. Some information respecting the intended operations in this mine, would be valued by myself and many others of the adventurers.—L. M.: *Bodmin, May 1.*

NORTH WHEAL ROBERT MINING COMPANY.

SIR,—In your Journal of the 3d April, is inserted an anonymous letter, or rather a report, relative to this mine, which is considered prejudicial to the interests of those who are concerned in it; as an agent of the mine, I beg to forward a few facts for insertion, that such prejudice may be removed. When I came here, on the 1st of Sept., 1846 (my report, prepared for a meeting then held, has already appeared in the Journal), I found the poor old mine had been wretchedly tortured, and her frame completely out of order; she had been tapped in the head (top of the hill) for the water complaint, and her extremities were equally neglected. A shaft had been sunk, and not only the shaft, but the ground had gone down for 5 fms. from it. The work then in operation was a level, driving west, 4 fms. below the adit level; that level I considered useless, and, of course, stopped it, and put the men to sink a winze where it would be of service, to communicate with the level below. We sunk 4 fm. in the winze—the water increasing, and lode improving, I was anxious to ascertain what the lode would warrant, before going to the expense of putting up machinery. We succeeded in sinking 1 fm. more, which was all we could do, the lode still improving; in this effort the water sunk 3 ft. in the shaft, on the top of the hill—so you will see, Mr. Editor, we found out the complaint. I consulted several of the shareholders, and they were unanimous, or nearly so, in adopting the quickest, best, and cheapest plan to get at the ores. I then proposed the lode should be cut at the 20 fm. level, by the present shaft; the purser thought the old shaft might be cleared up, but said, if I recommended sinking the new shaft, he would not oppose me. I contend, the old shaft could not be cleared up and timbered, for the money the new shaft cost. I took the angle of the lode in the winze where we had the ores, which was 45°—not a very difficult thing to find out, at the proper angle, what distance that would be at surface, to cut the lode at that level. I should make a few remarks here in reference to the mine—but, as it is to be inspected by an experienced agent shortly, I shall leave it for his better judgment. Perhaps, some of your readers may say, why had I trusted to the angle of the winze only, in an old mine like this? In answer, I beg to say, there was no other place I could take the angle more than the height of a level. The shaft No. 1 is gone to quat; shaft No. 2 is neither a perpendicular, or and underlay; shaft No. 3 is 8 ft. farther east at the bottom than it is at the top by my dialling, and a man cannot crawl through it; shaft No. 4 is most like a shaft, and that is 4 fms. behind the lode at 12 fms. deep. There has been a great deal said about my great shaft by your informant—not only in your columns, but about the neighbourhood of Tavistock. In answer to that, I would say, my great shaft only cost 9*l.* per fm. at most, and is a shaft *now*; while the shaft at the top of the hill cost 12*l.* per fm. In the 10 fm. level, in my great shaft, I considered I had a cross-cut to drive 5 fms., to cut an old level. I then proposed to sink the shaft down to the lode, about the 20 fm. level, without calculating on the lode changing its underlay, or direction; when at 17 fms. deep, not 12 fms., to my surprise, we fortunately discovered, in the north-east corner of the shaft, and old level had been driven 20 fms., and cut the lode where the former workers had driven 6 fms. on its course. The 10 fm. level, which I supposed, appeared to be only 7 fms.; the present level I had no account of. I beg to say, however strange it may appear to your readers, I was never furnished with any information from the late manager, or even an old book to refer to; Mr. Coller offered his, but I could not get any assistance from them. To conclude, I beg to say the mine is 17 fms. deep, not 12 fms.; the level is 27 fms. east from where we had the bunch of ore in the winze, and about 9 fms. below. The water has sunk already more than 3 fms. in the winze; we are tapping, and the water is coming profusely—so that I may expect, in less than two months, to have a dry mine, 238 fms. long, and 50 fms. deep, at the top of the hill, and be able to prove what has already taken 23 years in endeavouring to accomplish.

Horrabridge, Devon, May 3. WILLIAM HEATH.

PENN RECCA QUARRY, ASHBURTON.

SIR,—Knowing your desire to obtain *accurate* information relating to all adventures, I beg to correct a rather inaccurate description of the works now prosecuting at the Slate Quarry, near Ashburton. In the first place, it is not called Penn Hill Quarry; but Penn Recca Quarry. It is not a blue slate, but that which, for many purposes, is far preferable—a beautiful green; and as there is a most abundant supply of it, and the proper means have been taken by a judicious, though very large, outlay, to produce it at the least possible cost, it is presumed that, from its proximity to the shipping port of Totness, a considerable demand will arise for it, as soon as it is got into work. The tunnel, as you say, will be completed—thanks to gun-cotton—in July, if not before; and I sincerely wish we had been able to avail ourselves of it in the commencement of this very tough job; for, as you well know, 700 yards of rock, much harder than granite, requires plenty of powder and patience. In conclusion, I may add, this property is not in shares; but is the private enterprise of two individuals.—ONE OF THE TWO: *May 5.*

STATISTICS OF CORNISH MINES.

The following are some particulars respecting Cornish Mines, which will be read with interest, as affording a criterion for judging the value of mining property to parties about purchasing. The mines enumerated are considered by practical men as likely to last 20, 30, or even 50, years:—

CORNISH MINES PAYING AS FOLLOWS:

Sh.	Mines.	Per Share.	Div. per Annum.	Purchase.
1000	Stray Park	£33	£ 6	5 years and 6 months.*
99	Wheal Seton	800	128	6 years and 6 months.
128	East Wheal Rose	1300	240	8 years.
1000	Carn Brea	100	12	8 years and 9 months.

* The reason of Stray Park shares being so much lower than the others is, that there was great uncertainty, up to the 16th of April last, in obtaining the sett of Wheal Francis, which is a continuation of Stray Park lodes—which sett was obtained on that day for 21 years; and as soon as it was known, purchases were made—and no doubt will be, until the shares reach 48*l.* or 50*l.* per share, or eight years purchase.

PROGRESS OF MINING IN RUSSIA.

The unexpected command of such extraordinary reserve funds at the disposal of the Emperor of Russia, as to enable him to become the greatest real money lender of modern times, has excited surprise and inquiry. Eighteen years have not elapsed since the great autocrat was himself in the money markets of Europe as a borrower, when the late Mr. Rothschild, to whom application was made, directly or indirectly, as understood, was reported to have answered, in allusion to the belief then prevalent, that Russia was aiming to provoke a general war, "that he had the peace of Europe in his breeches pocket, and meant to keep it there." The case is different now, when the before needy monarch can afford to buy up the depreciated securities of great nations, and advance the metallic store of which they are in want, at the rate of 30,000,000 of roubles, or 4,675,000*l.*, by one monetary edict or operation, leaving himself still with 84,000,000 of hard rubles in hand, or say 13,125,000*l.* A brief reference to Russian mining progress may to some assistance towards a solution of these phenomena.

The workings of the gold mines of Siberia and the Ural in the last year, are stated, from official sources, to have far transcended the yield of any former year. The total quantity received at the mint is given at 1722 poods, 29 pounds, 87 zoltnicks. The pood equal to 36 lbs. 1 oz. 11 drams, English, 40 pounds Russian to the pood, and 96 zoltnicks to the pound. The quantity surpassed the production, till then the largest, of 1845, by 336 poods, 23 pounds, 46 zoltnicks. The value in sterling of the gold produced in 1846, is roughly estimated at about 4,000,000*l.*

The rate of production of the mines progressed from the year 1819 to 1846 as follows, taking, for the sake of brevity, every third year:—

	Poods.	Pounds.	Zolts.
1819	314	31	—
1822	410	8	61
1825	413	1	8
1828	314	37	69
1831	681	20	34
1834	1341	25	60
1846	1722	29	87

The aggregate quantity of the eighteen years represented 12,624 poods 28 pounds 24 sol., roughly estimated in sterling value at about 29,000,000*l.* In the ten years preceding, from 1819 to 1828, the mines of the Ural alone being worked, the yield had advanced from 40½ poods of gold in the first year, to nearly 318 poods in the last year; the aggregate product of the ten years being 1711 poods, of the sterling value of about 3,940,000*l.* In 1829, the existence of gold, not before suspected, was ascertained in Siberia. The first mines discovered were, however, too poor to defray the charges of working, and further research was for a short time abandoned. Two skilful officers of the engineering and mining departments, appointed *ad hoc*, and invested with the governorship of Tornsk and the direction of the mines in that province, changed the face of affairs in 1830, by further investigations. Richer seams were found; and thus spurred on, enterprising individuals were not slow to follow in the new track. No marvellous success was achieved at once. In the first four years the gold produced had only increased from 5 poods 32½ pounds to 35 poods 32½ pounds. In 1834, production took a great start at 65 poods 18 pounds, and in every successive year since has been ascending uninterruptedly. In 1842, 12 years after the discovery and first working, the Siberian gold mines yielded 632 poods, exclusive of 30 poods of gold more extracted from the silver of the mines of Kolyvan, against 310 poods for the same year from the mines of the Ural, still so rich, though no longer pre-eminent in production.

MINING IN SOUTH AUSTRALIA.

The *Ganges* has arrived, with news from this colony to the 26th December. The *South Australian Register* of the 23d contains the following paragraph:—At or near the Reedy Creek mineral special survey, a remarkable discovery has been made of a metallic substance, hitherto new to the colony, and which is said to be tin. There is a lode big enough for three men to work abreast; its tendency being north and south. It seems impossible to prescribe limits to the lode of which the discovery forms a part, for, according to our information, it traverses the country until it pierces the cliff of the Murray. A private letter of an earlier date, advising the shipment of a sample of the ore, intimates the locality of the deposit to be the Australian Mining Company's special survey at Reedy Creek, and states that, if the surmises entertained prove correct, the supply of that kind of ore was inexhaustible. We regret to learn, that the sample having been sent by the *Brechin Castle* was lost; and that, therefore, the shareholders of that company are still without official confirmation of the fact; of which, however, there appears but little doubt, from the opinions expressed by the oldest Cornish miners in the colony.

The local Government seem to have offered a compromise on the subject of mineral reserves. They have intimated their intention to reserve gold and silver mines, and to demand a royalty of 1-18th off other metals. There is little danger of the colonists giving in to such a proposal. Mines, like lands, are best worked—can only be worked—by private industry. Mining property ought not to be more highly taxed, or differently taxed, for the support of Government than other property. The settlers in South Australia and the non-resident proprietors of South Australia must resolutely and uncompromisingly resist this attempt to impose the fetters of old feudality on their nascent industry. The settlers in Western Australia must prepare to co-operate with them; and the settlers of New South Wales ask to be emancipated from similar restrictions.

MINERAL WEALTH OF WESTERN AUSTRALIA.

We are in receipt of intelligence from this colony to the 2d of January, from which we find, that, as in the province of South Australia, the development of its mineral wealth was engaging much attention at Swan River. On the 16th of September last, a company, entitled "the Western Australian Mining Company," was formed, for the purpose of ascertaining and working the mineral resources of the colony. About 5000 shares (of 9*l.* each) were taken before the 30th of last month.

The *Dispatch* has brought home a considerable quantity of lead ore, found in the Darling Range, near the River Canning, about 15 miles from Perth, and little more from the shipping port of Fremantle. Good specimens of copper ore have been found in abundance near Perth. It was announced in the public papers, of the 23d Dec., that parties who had been boring for coal on the Murray (south of Perth) had come upon a seam of superior quality to any previously found, at a depth of 40 ft. from the surface; and that they had also discovered a vein of metal, believed to be zinc; but the greatest excitement was occasioned by the discovery of an extensive bed of fine bituminous coal to the north of Perth. It was discovered in August or September, by the Messrs. Gregory, who started from the settled part of the colony on the 7th of the former, and returned to it on the 22d of the latter month, having travelled in the interim 1100 miles by computation. During this excursion the coal was discovered. Great care was taken to conceal from the general public the knowledge of its exact position, but the Government schooner was despatched to the place two several times. It is, however, understood to be situated on the Irwin river, about 200 miles north of Fremantle, and 40 miles inland. The discoverers describe the country intervening between the out-crop of coal and the sea as too steep for a canal, but sufficiently adapted for a tram road. There were two seams of coal—one 5, the other 6 ft. thick; the immediate lie of the nearest strata being red sandstone, black shale, white clay; 5 ft. coal, red sandstone, black shale, white clay; 6 ft. coal, red sandstone, black shale, white clay; here the strata became buried, so that the next coal seam was not visible. The first 100 ft. of depth was red sandstone. The object of the second trip of the Government schooner was to trace, if possible, the coal seam to some point nearer to the coast. In this they failed, but the out-crop proved to be even larger and finer than had been supposed, and the coal of excellent quality. The schooner brought 5 cwts. of it to Fremantle, on the 28th of December last. The communication with the coast was of a fair description, along a country almost level, and calculated to form a good hard-road without any outlay of capital. Scarcely of less importance than the finding of this coal, is the discovery that a vast extent of fine country exists to the northward of Moresby's Flat-topped Range, precisely in the direction described by Capt. Grey, and corresponding with his account in every particular.

The Western Australian colonists, it appears, are seeking to encourage trade between themselves and Ceylon and Mauritius, and they also entertain the project of a regular mail communication, in order to establish their importance both in India and the mother country. Mineral research has also evidently occupied much of their time and attention, and they manifest considerable anxiety to increase their list of exports: the woods of the settlement are to be laid under contribution with this view, and a large quantity of trenails will be shortly introduced to the notice of English shipwrights, to test their value compared with those at present in use.

Speaking of the recent mineral discoveries, a private letter from Perth thus describes them:—"Our colony has lately been on the *qui vive*, owing to the discovery of a large bed of fine bituminous coal, a considerable and satisfactory sample of which has just been brought to Perth by the Government schooner *Champion*, despatched to the northward for the express purpose. This is, undoubtedly, a most fortunate occurrence, as it may hereafter be the means of inducing steamers to touch here to replenish fuel; and if so, your anticipations of mail communication may be speedily realized: The position of the coal-bed is not publicly divulged, but it is believed to be about 150 miles to the N.N.E. of Perth, with a good line of transit to the shipping point. There have also been several good and extensive specimens of lead and copper ore found in the vicinity of Perth, and which promise a fair return for working. The *Dispatch* (the bearer of the present mail), conveys a considerable quantity of lead ore, which is brought from the Darling Range, close to Kelmscot, on the River Canning, about 15 miles hence, and but little more from our shipping port—Fremantle. A mining company has been formed here for the double purpose of encouraging research for mineral, and for working the veins already discovered. All we need now is capital and labour to carry on our operations, and our colony will then be based on firm foundations.

IMPROVEMENTS IN MACHINERY FOR MAKING MALLEABLE IRON.—Mr. John Condie, of Glasgow, has obtained a patent for a direct-action steam forge-hammer, in which the novelty consists in causing the cylinder, to which is attached the hammer, which forms a portion of it, to ascend and descend in a vertical direction upon a fixed piston and rod. The piston-rod is fitted in a powerful vertical standard frame, fixed firmly to the ground by bolts and screws, or any other known means; over this is a cross-head, supporting the gearing and piston-rod. To the sides of the framing are affixed strong guides to regulate the cylinder in its ascent and fall. The cylinder itself is cast thick, and the lower head, which may be of any weight necessary, forms the hammer; the anvil being immediately below and within the frames, assists in adding to its stability. As the piston-rod is fixed, the steam being admitted above it, carries up the cylinder, which, coming in contact with a tappit, opens the eduction valve, and the cylinder and hammer immediately descend, the ascent and descent being regulated by the usual gearing. This invention, it will be seen, bears a strong analogy to Nasmyth's direct-action steam-hammer, the only apparent difference being, that while Mr. Nasmyth's hammer is attached to the piston-rod, the one under notice is suspended to, and forms part of, the moveable cylinder.

Original Correspondence.

REDUCING COPPER ORES BY ELECTRICITY.

SIR,—I beg to inform "T. H.," of Cornhill, that a patent was granted to Mr. J. Napier, of Hoxton, in which the following method of treating copper ores by electricity is described:—He says, "a crucible or other vessel made of an electro-conducting material (those used by the patentee have been made of plumbago) is prepared, by lining the inside all round with clay luting, except the bottom, which is left uncovered. The regulus or calcined ore (which, when sulphurets have been used, should have been roasted, to drive off as much of the sulphur as possible) is introduced into the vessel with the usual fluxes, and the vessel being then placed in an ordinary air furnace, the heat is kept up until the mass is in a state of fusion. In the meantime, the patentee prepares a common voltaic battery of copper and amalgamated zinc, charged with acidulated water (1 part sulphuric acid to 25 water): he attaches to the positive wire of the battery an iron rod, having an iron disc, a little smaller than the interior diameter of the crucible, rivetted at right angles to its extremity; and to the negative wire of the battery he attaches an iron rod only: the iron disc is placed on the surface of the fused mass in the crucible, and the rod is kept in contact with the outside of the crucible: the fused matter now forms part of the electric circuit—and the heat being kept up, the metal is gradually reduced, and deposited at the bottom of the crucible." This answer will also serve for "F. B." There are, I believe, some other patents, with the particulars of which, however, I am not acquainted.

23, Hawley-road, May 3. JOHN MITCHELL.

HYPOTHESES ON IRON.

SIR,—Your correspondent, "Scrutator," has evidently mistaken the nature of the substance obtained by acting on mixtures of lime, silica, and alumina, by a very high temperature, in supposing that a kind of opaque body should necessarily be obtained, and not a fused transparent mass—in fact, a perfect glass. There are very many compounds of lime, alumina, and silica, which, at a proper temperature, form perfect glasses; and the cause of this transparency is, that a mixture of these earths in certain proper proportions can be fused at a certain temperature, and that the fused mass has for one of its essential characteristics the property of being perfectly transparent. There is nothing more extraordinary in some of the silicates of lime and alumina being transparent, than there is in the corresponding silicates of lime, alumina, and potash, or soda (ordinary glass), having the same property. As regards the peroxide of calcium, I must again state, that we have no precedent in which an oxide of the constitution of the one in question, has ever existed at the temperature either of a glass-pot or the blast-furnace. The whole of the oxides expressed by the formula—metal 1, oxygen 2—whether alone, or mixed with other bodies, and exposed to a high temperature, are decomposed with the elimination of oxygen gas, and either a protoxide or sesquioxide is produced. The only reason I can at present give to account for the glass mentioned by "Scrutator" becoming "ambitty," is, that when above a certain quantity of lime is employed in the manufacture, there is more than one silicate of lime formed, one more fusible than the other, the latter crystallising out in white lumps, as the glass cools. That the glass does not become "ambitty" by cooling in the pot, but does so when cooled on the iron, may be taken as an objection to my supposition; but I do not think with any effect, for we have many instances of bodies becoming crystalline merely on being touched. Why may not glass, with an overdose of silicate of lime, be in this peculiar state?—JOHN MITCHELL: 23, *Hawley-road, Kentish Town, May 3.*

HYPOTHESES ON IRON.

SIR,—Whilst Mr. Mitchell's experiments are completing, I beg to name one or two more of those difficulties which are offered by practice to the analysis—that of grey and white iron; the last contains most carbon. Into a foundry air-furnace, a quantity of pig-iron is introduced; the iron, in melting, loses of its richness, or, as has been thought, its apparent carbon. If it be only partially grey, or of the brightest shades, the casting will be white or hard metal. This, according to analysis, must have been caused by absorption of carbon; and the longer it is exposed, the whiter it will become—or, synonimously, the more carbon be absorbed; but let, instead of a casting being made, the exposure continue—the continuance should produce a continued increase of carbon; but, on the contrary, it by degrees wholly disappears, which is the process of puddling, and malleable iron is the result. Again, grey pig-iron is thrown into the refinery and, after a time of exposure before the blast, is directed downward on its surface, runs forth in the brilliant crystallisation of finers' metal. Here, again, according to analysis, carbon has been absorbed; or rather, we may say, from the loss of oxidated iron in the cinder, that the carbon remains positively the same—its *proportion* is increased by the destruction of iron. Now, let the same process be continued, and the metal sunk in the hollow fire, the proportion of carbon should continue to increase; yet the contrary is the fact, and the result here, as in the air-furnace, is malleable iron, which, indeed, is the case if the refining be long continued. These are the contradictions which the assertions of analysis create. Grey iron, cooled suddenly, in small masses, becomes white, and this where it is impossible it can absorb carbon. I have been informed of iron, made with certain ores, where the appearance of the cinder warranted the first foundry iron; yet it was, on the contrary, white and crystallised, possessing, in an extraordinary manner, the properties of grey iron, and could be worked with the chisel or the file.—FERREUS: *May 4.*

MANUFACTURE OF IRON.

SIR,—It is important to correct an error of your correspondent, "Scrutator" (who appears to have that facility), respecting Mr. R. Mushet's letters in your Journal. That gentleman is not Mr. Mushet, sen., but his youngest son; there have been no letters by Mr. Mushet, sen., lately in your pages. The latter is well known for more than 40 years as having established, by indefatigable experiment, those relations betwixt iron and carbon, which perform so interesting and important a part in manufacture; and, until his time, were imperfectly or precariously acknowledged. The mistake of "Scrutator" is utter confusion. Mr. Mushet, sen.'s, results have been distinguished for care and accuracy; he has confined himself to a certain province; and, by the repetition of experiments in every gradation of form, is one of the safest of guides, as far as possible removed from unwarranted speculation. Indeed, the contrary has been the quality of his mind; he has abstained from pushing his results to the conclusions which were justly their due; and so far from hazardous argument, his acts have been limited, perhaps, by the indulgence of too safe a caution. It is the greatest possible injustice to his solid acquirements, and true reputation, to confound his writings with inexperienced essays.

Gloucester, May 4. DAVID MUSHET, Jun.:

ON THE MANUFACTURE OF IRON.

SIR,—On looking over the Journal of the 1st inst., I am glad to find that one person at least entertains the same ideas as myself on the action of steam upon the sulphurets. I am obliged to "Gossan" for giving a very clear and complete explanation of my views. At the point where I propose to diffuse the steam, it would have no objectionable effect by lowering the temperature of the furnace. A patent for heating steam was taken out by Mr. Perkins, of steam-gun celebrity, which I suspect has been renewed by his son. If the action of heated steam, not merely upon the sulphurets, but for various applications in the arts, was properly understood, this patent would prove extremely valuable. Should "Gossan" be (as I suspect, from adopting that signature he is), engaged in mining operations, I could give him some useful hints. By the application of steam, heated up to 700° Fah., to mundic, and proper arrangement of apparatus, &c., not merely sulphur, but ammonia, may be procured—the latter requires an acid to fix it. This may be done with sulphuric acid; or, more completely and economically, by the muriatic waste in alkali works. This subject has for long engaged my attention; and I now feel satisfied that, after many years' investigation into the matter, I have arrived at correct conclusions, as to the formation of ammonia directly from its elements—hydrogen and nitrogen. The consumption of ammonia would be very great if it could be produced at a cheap rate. A great extension of the use of glass for various purposes, to which, from its high price, on account of heavy duties, it has not heretofore been applied, may now be looked for, creating an increased consumption of alkali. The decomposition of salt, to form alkali, may be effected through the agency of sulphur ores—a matter of great importance to the mining interest, requiring their co-operation and assistance to carry out. I make these few remarks to direct attention to the subject at this time, and will return to it again when more at leisure.—SCRUTATOR: *Pontyberem, May 3.*

MINING JOURNAL

M. FAUVELLE'S SYSTEM OF BORING.

SIR,—In your Journal of the 5th of December, you state, for the information of a correspondent, that the Pennant Lead and Copper Mining Company had made arrangements to test the capabilities of M. Fauvelle's boring apparatus. You will greatly oblige me, and many others who feel interested in the result of this experiment, if you will supply information on the following questions:—1. Has the trial of his apparatus been made—and, if so, what is the result?—2. Or, is the trial now in progress—and, if so, what are the expectations entertained respecting it?—3. Can you inform me to whom I must apply, if I should decide on having the experiment applied to my own estate; and along with the name of the gentleman, give me his address? AN ADMIRER OF YOUR JOURNAL.

Birmingham, May 3.

BIRAM'S ANEMOMETER.

SIR,—I have observed in your Journal, of the 17th April, a letter from Mr. Storey, of Bensham, in which he states that one of the sources of evil in the present system of ventilation is the want of a ready practical method of ascertaining the velocity of the air in the air-courses. I beg to inform your correspondent, that this long-acknowledged deficiency has been lately satisfactorily supplied by the anemometer, invented by Mr. Biram, and manufactured by Mr. Davis, of Derby. Having had opportunities of practically testing this instrument, I can speak confidently as to its utility; and am so much impressed with its value in the great work of ventilation, that I consider it ought to be attached to every extensive and well-regulated colliery, and that no future Government inquiry will be complete unless its aid be obtained.—THE BLACK DIAMOND: *Kilburne, Derby, April* 28.

STEAM APPLIED TO A BLAST-FURNACE.

SIR,—I have had an opportunity of witnessing the effects of steam applied to a hot-blast furnace—water, which had made its way into the cold-blast pipe, leading to one stove, being driven by the blast through the red-hot pipes of the stove into the furnace. It was observed, that an intense heat was generated around the tuyeres, so that it was impossible to work for many hours, without stopping to repair the tuyeres' sides. The hearth became full of solid iron, and that which flowed over the notch was in the state of cast-steel. Scarcely any blast found its way upwards, and the furnace lost heat rapidly—insomuch, that a candle could not have been lighted at the filling places. The cinder flowed copiously, and was of a dark and porous structure. The burden of the furnace was at the time exceedingly light, and left no doubt but that the cause in operation was the steam thus forced into the furnace; indeed, the same phenomena presented themselves in many subsequent trials of a similar nature.

Coleford, May 4. R. MUSHET.

HYPOTHESES ON IRON.

SIR,—"Scrutator" appears to me to have arrived at very just conclusions in his communication to the *Mining Journal* of last week. It is in combination with other oxidised bases, and at an intense temperature, that peroxide of calcium is formed. In blast-furnace cinder, or slag, a number of metallic bases are united, in combination with silicic acid; and these bases exist in various states or stages of oxidation, depending upon the relative proportions of the bases, and also upon the intensity of the heat to which they have been exposed. Protoxide of calcium appears to be the most powerful agent in the deoxidation of the metallic earths fused along with it in the blast-furnace. By its peroxidation at a high temperature, in contact with the peroxide of iron, which gives to the slag a dark and greenish hue, the iron is protoxidised, and the slag becomes either transparent, or opaque and white—transparent, when the whole of the lime is peroxidised; and opaque, when the lime, being in excess, is only partly peroxidised. When a slag thus formed, and possessing transparency, is cooled slowly, or exposed to a *low* temperature, the protoxide of iron is again peroxidised at the expense of the peroxide of calcium; and the pure, transparent slag becomes discoloured again by the peroxide of iron, and is rendered opaque by the calcium being again brought to the state of protoxide. Protoxide of calcium possesses the same deoxidating power at high temperatures over allumina, potassa, soda, and other oxidised bases; and the extent of this power seems to be directly proportional to the intensity of the heat above that point at which these bases first begin to yield up their oxygen to the protoxide of calcium. When the temperature is diminished, an immediate reaction takes place in the fused mass of slag—the peroxide of calcium giving up its oxygen to the other deoxidised bases combined with it. If, however, a portion of the fused mass be suddenly cooled, consolidation takes place before the peroxidised calcium can yield up its oxygen to those bases, and the portion thus cooled will retain its transparency. Sometimes when the calcium is very predominant, and the slag in consequence becomes nearly infusible—or, at least, only susceptible of vitrification—and forming a dense mass of a bluish colour, as the temperature is reduced, and approaches to that of a dull red heat, that portion of the calcium which had been peroxidised, gives out its oxygen, and the mass bursts in pieces, and is reduced to a white powder. "Ferreus" may sneer as much as he pleases at the peroxidation of the calcium; but it is impossible to obtain good iron, or to account for its production, unless this peroxide is formed in the blast-furnace. Carbon cannot alone deprive an oxide of iron of all its oxygen; for the last portions of oxygen are strongly retained during fusion, and can only be set at liberty by the agency of lime. Diminish the dose of lime in a furnace, and increase the quantity of carbon, *ad libitum*, and you cannot obtain anything but a thick and slaggish quality of imperfectly-revived pig-iron, with a dirty, earthy fracture, corresponding to the insufficiency of the limy part of the burden. Nor does this lime effect the purification of the iron, by forming an alkaline silicate, and thus protecting (as the learned "Ferreus" intimates) the iron from the dangerous affinity of the silicic acid; for if not a particle of silica be present, still you cannot obtain a good quality of pig-iron without a sufficient quantity of lime to take up, by its peroxidisement, the last and strongly-retained portions of oxygen, combined with the iron.

In reply to "Ferreus," if I have stated that the earths deoxidate *each other*, I have spoken—or, rather, written—inaccurately; as they do not deoxidate *each other*, but one earth deoxidates another; and may itself be deoxidated by a third earth. As to the Kilkenny cats, I think they must have been very *silly cats—quasi: silicates*—and were probably of the same family with those *silicates* formed, as "Ferreus" states, in the blast-furnace; and their performances, no doubt, gave rise to the *cat-a-leap-tic* somersets to which he alludes. I did not consider it necessary to inform "Ferreus" how the oxides of aluminum, &c., &c., are metallised; but if he is anxious to be enlightened upon this subject, I can at once relieve him, by stating that they become metallic by yielding up the oxygen with which they are combined. I have never observed that alumina is noxious—it was aluminum which I stated to be an alloy prejudicial to the quality of pig-iron; nor does the protoxidation of the alumina, in contact with protoxide of calcium, involve, as a necessary consequence, an alloy of either of these bases with the iron, seeing that alloys can only take place when metals are wholly deprived of oxygen. Carbon, as I before stated, deoxidates all the metallic bases at various temperatures; but this does not invalidate the fact of one metallic base deoxidising another, as I have recently maintained; neither has the deoxidation, by carbon, in the upper regions of the blast-furnace of the oxidised bases, any connection with the deoxidations which take place in the slag where carbon is not present. The best authorities deny the existence of the peroxide of calcium, and the protoxide of aluminum; so be it. Drs. Ure and Karsten are both great and expert chemists; yet they both fall into the most puerile errors in treating of iron—such as making grey iron out of white, by fusing the latter in a black lead crucible. The best authorities are often mistaken; and their not having succeeded in preparing peroxide of calcium, is no proof that it can have no existence. As far as I have observed, it cannot exist separately, or isolated; because it then gives up its oxygen, and becomes either lime, or hydrate of lime, according as it is in a dry, or in a moistened, state. In conclusion, I would put a question to "Ferreus," or any other of your readers, versed in these matters of discussion—In what state is the iron found in a blast-furnace immediately before its fusion commences? Also, what are the different appearances which it presents when the furnace is yielding grey, white, or steel-grained grey iron. By its state and appearance, I mean the extent of the deoxidation and carbonation of the ore, which is requisite to produce the above three qualities of pig-iron. I deny, *in toto*, the existence of carburet of iron in white iron; pig-iron, as run from a blast-furnace, is generally a mixture, or alloy, of grey iron; white iron and steel, for the whole of any one cast of iron, is never revived in the same state. The most thoroughly-prepared portions of the materials yielding grey iron; those which are less matured, white iron; and the least prepared, affording steel, or even malleable iron; all of which drop into one common receptacle—viz.: the hearth—whence they flow in mixture to form the pig-iron of commerce. Hence, when pig-irons are analysed, a portion of carburet is found in white, as well as in grey, iron; because a portion of grey iron is present. As the proportion of grey iron is increased, the mixture begins to show spots of grey iron, and is called mottled iron; and it, at length, becomes bright-grey, dark-grey, and highly-carburetted, as the proportion of grey iron is gradually augmented. The formation of graphite, mentioned by Mr. Mitchell, from a coke, cemented for a length of time, and at an intense heat in charcoal, most probably arose from the coke containing—as all cokes do—a portion of oxide of iron; and a very small portion of iron is combined with carbon to produce graphite in a state of purity.—ROBERT MUSHET: *Coleford, May* 4.

EAST OF SCOTLAND MALLEABLE IRON COMPANY.

SIR,—Though I am a constant reader of your Journal, I had, till this morning, overlooked a paragraph which appeared on Saturday last, respecting the East of Scotland Malleable Iron Company. As you had only seen my first letter, and that which Mr. Alison calls his answer, you could scarcely have written differently from what you have done; but I now send my second letter, in which you will find that a series of averments, distinctly and deliberately made by Mr. Alison to my prejudice, are utterly destitute of truth. The impression which he has laboured to produce—and, in your case, has successfully produced—by his answer, is, that he and I are competing parties for the supply of the East of Scotland Malleable Iron Company with pig-iron. This is a gross misrepresentation. Though I am both the landlord and lessee of minerals, I have never, *either directly or indirectly, by word or writing, by myself or others, made any proposal of any kind on the subject of my minerals* to the East of Scotland Malleable Iron Company; and, of course, both Mr. Alison's assertions, and the inference which you naturally enough drew from them—viz., "That the erection of furnaces there (at Knockhill) was successfully opposed by Mr. Alison"—are unfounded. Mr. Alison says, that I at one time told all I met, that the Forth Company were giving their works very cheap. Mr. Alison knows perfectly, and at the time when he penned his answer, knew perfectly, that what I told to all I met was the very opposite of what he says I told. His assertions on this subject I have contradicted in the strongest terms that self-respect will allow me to employ. I have dared him to the proof, but he shrinks from it, and only talks of treating me with "silent contempt." This, I admit, is rather a novel and ingenious method of backing out of a palpable misrepresentation.

Before I conclude, allow me to inform you, and any of your readers who may take an interest in our Malleable Company, that the proposed amalgamation—which is now universally understood to have been a gross job—has got its *quietus:* though Mr. Alison, whom it would have enriched to the extent of about 40,000*l.*, as his individual share of profit from the sale of the Forth Iron-Works, forgot all the delicacies of his position, and, in direct defiance of the contract, made large purchases of scrip, for the purpose of enabling him to swamp the independent shareholders by fictitious votes, and thereby force the amalgamation, he was signally defeated at a general meeting held on the 30th April, as you will see by the enclosed circular. The result is most gratifying, and argues well for our Malleable Company. Indeed, I am fully convinced, that nothing is now wanting to our prosperity, but to be allowed to confine ourselves to our own proper business, and eschew all the mad projects with which we have been pestered beyond endurance by a selfish and incompetent chairman.—HENRY BEVERIDGE: *Inzievar by Dunfermline, May* 5.

THE IRON AND COAL TRADES—REMEDY FOR "STRIKES."

SIR,—We frequently hear of *strikes* among colliers about a *drop* or a *rise* of 2d. upon the ton of coal—"strikes," which often create want, vice, and misery, over very large districts of country, reducing the collier and his family to beggary, and the shopkeeper—of whom he usually obtains his necessary household supplies—to insolvency and ruin; all this is truly to be deplored, let the fault be wherever it may. Any plan, therefore, that may remedy, or even mitigate, these great evils, has a fair claim to the serious consideration of all parties concerned, as well as of those who may be disposed to promote the public good. With your permission, then, I beg to propose modes by which iron and coalmasters, particularly those who are working upon bituminous coal, may realise, in many instances, the amount of five or six "*drops*" in the cost of their coal-getting, without at all reducing the earnings of the collier, and, at the same time, there would be made available millions of tons of coal for the benefit of the *proprietor* of the mines, and of the country at large.

To effect these desirable ends to the fullest extent, a sort of "*Reform Bill*" ought to be acted upon throughout the coal and iron trades of the country, containing provisions that should prevent the immense waste of *small* coal, now left in what is usually termed the *gob*. The aggregate amount of this wilful waste can scarcely be credited. The yearly get of coal in Great Britain has been estimated at upwards of 40,000,000 of tons! It may, therefore, be safely concluded that the amount of *small* left in the *gob* (including that which is lost by bad mining), is one-fifth, or 20 per cent. of that which is realised—this would show a dead loss of 8,000,000 of tons!! The exact quantity need not be quibbled about. Here, then, is one legitimate source from whence the iron and coalmasters may draw an equivalent for casual depressions in trade, instead of from the fully-taxed labour of their working colliers. In prosperous state of trade, the new results would, of course, be a net profit to the masters; but, Sir, there is another prolific, easy, and legitimate mode at the command of the masters of meeting such depressions, if they would but carry it out—namely: convert their refuse *small coal* into *coke*. More than 30 years' experience authorises me to say, that by coking clean small coal in ovens, a far superior coke may be obtained than by the present old and wasteful process, which ironmasters generally employ in coking their large coal for the use of their furnaces and fineries.

Thus, Sir, I have endeavoured to show—1st, that an immense waste is occasioned by the *gobbing* of small coal, instead of paying a small price to the collier for filling it into waggons, and for hauling it to daylight; here is a direct and permanent loss to the workmen, the coal and ironmasters, the proprietors of mines, the persons who may otherwise be engaged in the necessary transit of the mineral in question to and fro, and the nation at large, of the fair returns in labour and material upon the above estimated 8,000,000 of tons of coal per annum!—a money value of probably 3,000,000*l.* sterling!! and 2d. by the coking of coal in ovens of a proper construction, there would, with both large and small coal, be effected a saving of material to the amount of full 20 per cent., be the quantity whatever it may. Therefore, until the above important improvements are fairly carried out, I respectfully, and with all due submission, venture to think, that neither the iron, nor the coalmasters ought, in reason, to calculate upon meeting depressions of trade by a direct and comparatively sudden attack upon the hard earnings of the collier. But this, I am sorry to say, is the present general mode of meeting such depressions, probably, because it is the shortest and quickest; but such reasons will not bear a moment's reflection on any principle of either justice or Christianity—otherwise, those persons who are so frequently detected in, and punished for, conveying the property of others secretly to their own use, may reasonably claim the privilege of doing so, as being a "shorter and quicker" mode, than by an exchange of equivalents in goods or labour.

If I am wrong in my conclusions in this matter, no doubt there are persons connected with the coal and iron trades competent and ready to put me right. All I can say at present is, that by carrying out the important improvements hinted at in this communication, I am quite certain the coal and ironmasters would have the "lion's share" of the benefits of so doing—and, therefore, they would have no reasonable ground of objections to the propositions; neither could they say, I have recommended anything that would militate, in the most remote degree, against any of their money rights and privileges; for I would always strenuously act upon the maxim, "Give unto Cæsar," &c.—my sole object being, by means of a little "pressure from without," to induce the wealthy and powerful parties in the coal and iron trades to adopt some very great improvements—improvements which they can readily command—in obtaining, and converting up, a material that is now wasted to a prodigious extent, and of (in a manner) inestimable value; for what will become of the mechanical, social, and political power of Great Britain, when her coal mines become exhausted? "Use, but not abuse," should, therefore, never be lost sight of in this matter. The working collier, the mine proprietor, and the public at large could, for obvious reasons, start no possible objections whatever to the plans proposed.—Here, then, we have *an unmixed good!*

In order that I may not be misunderstood, I beg distinctly to state, that I am a decided enemy to "strikes," whether of colliers, miners, puddlers, or others. Every man, who may feel himself underpaid for his labour, has a right to carry such labour to any market he may think proper; but for a large number of men, in any particular pursuit, to attempt to force their employers into terms of their own dictating, would, if successfully and generally carried out, prove a fatal blow to the manufacturing interests, even of this truly great manufacturing country.

Nant-y-glo, May 3. S. B. ROGERS.

DR. CLANNY'S SAFETY LAMP—WIRE CYLINDER.

SIR,—I have the pleasure and satisfaction of transmitting herewith the wire cylinder of a safety lamp, which I used cautiously and diligently in several of our most fiery coal mines, at least a quarter of a century ago; and which, from the rapid precipitation of soot upon the talc cylinder, whether it were placed outside or within the wire cylinder, I found, from that cause, to be worse than useless, and it was accordingly discontinued. You may observe, that even to this day, some of the above-mentioned soot still adheres to the talc. I have placed the talc cylinder within the wire cylinder, so as to preserve it in the railroad carriage. Conjectures and propositions, except they be supported by direct experiments, conducted upon the basis of science, are worse than nugatory, and, generally speaking, create much mischief, by leading others astray from legitimate investigation and induction. For example, the working of coal mines, which, after all said and done, has heretofore, and must henceforth, depend altogether upon the experience, judgment, and energies of persons, who have been duly qualified and experienced in the discharge of their arduous and dangerous duties,—I allude to viewers and underviewers:—theirs is the field of danger and of legitimate investigation in the wonders of the earth, and which may be designated a *terra incognita* to many persons, who speak or write upon the subject.—W. REID CLANNY: *Bishopwearmouth, May* 4.

[The wire cylinder, forwarded by Dr. Clanny, lies at our office for the inspection of those of our readers interested in the subject of safety lamps.]

ON THE VENTILATION OF MINES.

SIR,—Whilst the all-engrossing topic of your Journal seems to be relative to ventilating mines, and as it is, without doubt, a subject worthy of the deepest consideration, the observations I have to make in relation thereto, may be deemed worthy a place in your columns. As an apology for my presumption to inflict on your Journal a continuation of the *cacoethes scribendi*, which seems to actuate the pens of a great number of your contributors, I will state, that I am the eldest son of a gentleman, who, for 45 years, exercised the profession of mining engineer and director in the north of England, of some of the most extensive collieries there to be found—who was the friend and correspondent of Sir H. Davy, whilst making his celebrated experiments and discoveries, which led to the invention of the safety lamp, furnishing him with the hydro-carburet, commonly denominated fire-damp, whereon those investigations were based.

With these infantile influences to determine the development of the inductive intellectual organs, and the example of a parent passionately devoted to the cause of science, it will not be deemed matter of wonder, that my experience and lucubrations should, in my own estimation, at least, both predispose and enable me to form a critical opinion on the subject of mining ventilation. About the year 1825, my late father (Mr. John Lees Radley, of Oldham,) in order effectually to ventilate a series of extensive workings in the Bent Mine, introduced a jet of steam, of 4 in. diameter, into the upcast shaft, or pit, which produced the most satisfactory result, so long as the levels and air-gates, with their arrangements of stoppings, cut-throughs, and doors to turn deflect, and make the draught continuous through distant workings, did not exceed a certain length. The credit of the introduction of steam, as a medium of ventilation in coal, and other mines, has been conferred (and accredited by your Journal) upon Mr. Goldsworthy Gurney—with what justice, the foregone statement will decide; but, although the method of steam ventilation was the most perfect and simple method for workings of small extent, there was something to be desired for extensive systems of works—and it was not until very near the period of his decease, that my late father suggested, and partially carried into effect, at a colliery subsequently drowned out, a most efficient system of ventilation, for workings of the greatest possible extent, not subject to neglect of operatives, but acting continuously as a necessary part of the daily—nay, momentary—operation of mining avocation. I believe I am now the only depository of this system of systems, capable of preventing the accumulation of coal gas in the useless and unfrequented parts of coal mines, whether designated as "goaf," "gob," or otherwise. It may be said, why do you not prolate such a discovery for behoof of humanity?—to which I reply, the thankfulness of humanity is something like what Junius said of the Duke of Grafton's charity—"It began at home, and ended there." If Government, or a colliery commission, will institute an inquiry, conferring a proper remuneration for the best, cheapest, and most efficient system of colliery ventilation, I will become, upon its invitation, a competitor for the honour and profits—but it must not be such a method of inquiry as that practised under the auspices of the Master-General of the Ordnance by the select committee, to whom you are expected to communicate your secrets, whilst they will not even give you their names, nor pledge the usual privities. It is a modification of this method of ventilation, that the Cardinal and Central Gas Light, Ventilation, Animal Charcoal, and Carbonaceous Manure Company is about to carry into effect, under the direction of the writer, but which will not develope, nor even give, a hint to the method before alluded to.

The operation of mine ventilation must not only not be left to the casual industry of any human agent, but be of such a kind, as not to be dependent for its integrity upon such an efficiency; for I know, from experience, that, like as the inhabitants, who have fled terrified from the devastation of volcanic eruption, look with longing eyes and expectant hearts to the coming time of quiescence of these terrible subterranean forces, and take possession of their ruined habitations and wasted fields—so the collier, and all others connected with the hourly operations of his labour, are the most faithless trustees of their own lives and safety.

Central Gas Office, Poultry, May 3. W. RADLEY, Ch. E.

MR. RICHARDSON ON VENTILATION.

SIR,—I have, I perceive, in my letter with this head, omitted an important feature in the contraction, and consequent velocity, of passage in the air-chimney, or upcast—the air in a swift passage being less obvious to cooling influences. The force of this gain will be estimated by reference to Mr. Storey's remarks on the deductions induced by water on the ascending current. It is economy which we need in applying those powers which Nature abundantly affords. We may be sure where great provisions are made with no certainty of practice in following them, but considerable uncertainty in disputing them, something yet uninvestigated produces the disagreement. The great motive power, which heat at the bottom of a shaft of several hundred yards ought to effect, is counteracted by the air cooling as it rises. It may be hot as it escapes the furnace, and in its vicinity; but this gives no true indication of the whole temperature of the column. The carbonic acid gas, also formed by combustion, becomes a heavy element, when cooled down, in addition to the rest—so that a furnace in the upcast effects but a fraction of its estimated capacity. Take, as an instance of calculation, the pits at Monkwearmouth, which have been stated as 1800 ft. deep. Were the temperature of the whole upcast column here raised 100° above the descending column, the air would rush upwards with a velocity of at least 120 ft. per second. If the pits were of equal size, the column of descent would rush with more than three-fourths that velocity; descending into the mines, with the speed of a hurricane, at 60 to 80 miles per hour, sweeping the workings, and tearing all before it. It is evident, therefore, the temperature of the upcast is not raised above 10° by this furnace. But were the column narrowed, by diminishing the area to $\frac{1}{10}$th, it would not then be difficult to maintain such a small amount of cooling surface at 100° above the open air; the velocity of the ascending current, at 100 to 150 ft. per second, would produce a speed of less than a tenth in the larger pit and level passages, which is sufficient to ventilate any mine; and this, I believe, the anemometer would prove, is not very often attained. I have seen paper, or other light bodies, carried fast into the air above the mouth of an upcast, as ought to be the case were the heat effective. Others may have seen it with more experience than myself; but what I have seen is, a lazy column of vapour slowly ascending. It is to the economy of power that I attribute Mr. Gibbons' effective details. Originally, he states, he could not procure his air-chimneys to be constructed larger than 20 by 14 in.; and I refer to the note as an amusing example of the difficulties which we well know are made when proposing what is new; yet these small passages, having an area of only 2 ft., were effective, and established the principle; and he finds, after a lapse of 25 years, that such works remain without care perfectly ventilated. This is the fruit of the economy of a small channel—whilst the *taper*-ventilating chimney over it, is a protection from those atmospheric changes which work just what they will over the *hiatus maxime deflendus* of an open, spacious upcast.

The impossibility, as advanced by Mr. Storey, of attaining ventilation

after explosion, where the furnace is at the bottom of the pit, is an argument the most decided I have heard against its exclusive use, and proof of the superiority of that ventilating chimney adopted by Mr. Gibbons. In all the reasonings on abstract columns of air, there has been one fact omitted from notice—that whatever affect a few hours of a sultry day may have in tending to produce an equilibrium of columns, in *the night* the ventilation must be restored. The natural increase of heat in mines at depths will make sure of this—and the tall chimney, protecting the air within it from cooling dews, whatever heat it has itself received during the day, will continue to accelerate the current; the air-chimney beneath, hermetrically sealed, is guarded by the warmth of the surrounding ground—the deeper the warmer. Water will be drained off by the larger pit adjoining it, and that cooling influence removed. A heat of air at 80° is very partial—and, in descending the pit, will be cooled sufficiently to exert a very adequate weight. We know how slight a shade will cool the summer air—a tree planted near, the shadow of a cabin—all these things are not insignificant in providing air of density to fall into the adjoining pit. When a fact is established, we may be certain there is a cause, or causes, and it is better to seek to discover these, than try to disprove it upon a theory. Slight causes will make chimneys smoke—causes as slight will cure them. Suppose the apertures of our chimneys were equal to the joint area of all the doors of the house; I have no question that, overlooking the point of velocity and momentum, has raised many of the difficulties of the present vexed question, and is conclusive on the effects of a loaded atmosphere, sluggish with moisture, where the downcast and upcast are of one size.

An unintelligible passage, extremely absurd, in my letter on Government interference, last week, has occurred—so far as I can decipher my meaning in the misprint, I conceive the words "in which they think the public spirit abroad of Government interest shames us," are what stood in my letter, which was hastily written. DAVID MUSHET, Jun.

Gloucester, May 4.

THE VENTILATION AND WORKING OF MINES.

SIR,—As a coal proprietor in the Lancashire district, I have, from week to week, read the different letters, &c., in your valuable paper, respecting the ventilation and working of mines; and nothing would have induced me to have publicly addressed you on this subject, my time being so much occupied with my different works, had I not read in them so many differing suggestions and recommendations. Having visited most of the coal districts, and examined the ventilation and working of different mines, the few observations I have to make may, I consider, be beneficial to coal proprietors in general, and to the public and labouring colliers in particular. On reading over the propositions contained in the various letters, I find all kinds of suggestions—such as getting coal by machinery; lighting mines, like towns, with stationary lamps locked up, &c.; others not using oil, lamps, or powder, &c., &c. Now, if these gentlemen had the practice by paying for the expense of such experiments, it would be the best way of showing them the folly of such remarks, as there is no better way of teaching than by having to pay for such learning, which is, in such cases, seldom or ever forgotten: I speak from experience, yet still I think we may all profit by asking a few questions in perfect good spirit, in order to discover and correct any errors that exist; adding, at the same time, my opinion on the subject, and making the inquiry, whether all your correspondents are aware that, in the Lancashire and other coal districts, there are coal mines of various qualities and thicknesses, producing different gases and different quantities of gas—some mines, for instance, with a dip or inclination of 1 yard in 2½, 3, 4, 7, and 11—some with no inclination at all, and others unequal and irregular, but full of *basins*;—again, the coal in some parts of a mine being 16 inches thick, in others 4 feet—some mines of coal with a good roof, others very bad—some with a good roof yet a soft floor, others with hard and soft floors alternately—some with rock roofs and floors—some mines with close measures both roof and floor, others with joints and openings in roof and floor—some mines with faults, others without. Some coals facing (as it is termed in Lancashire) on the level, others facing up brow, others at different angles between the two—some mines in working laying near the surface, others a quarter of a mile deep—some with old workings in the same seam, others have old workings in the upper seams under the same estate, where five or six seams are in working by different lessees—while some coal seams, or veins, require blasting, and others do not. Now, the above variations in coal mines no practical person will deny. How, then, is it possible that any person, or even Government commissioners, as is suggested, without first possessing themselves of a knowledge of all the local facts connected with the different mines, and their relative situations, &c., can attempt to prescribe any particular plan, or remedy, for working and ventilating mines, as it is proved to be utterly impossible to work all mines of coal upon one plan? and I should very much fear that, even under Government inspectors, as is proposed, there would be a greater number of accidents by them, being strange, and not having a perfect knowledge of the variation of the mines. I think a great deal may be done by a master and his viewer making themselves thoroughly acquainted with the nature of the mine, and endeavouring to keep the works to one plan, so far as is consistent: there are more accidents occur in coal mines through a continual change of underground viewers, or underlookers, and colliers, and the reckless care lessness of the miners themselves, than through any other cause—as one viewer may have tried one way at some other mine or colliery, and, forgetting the variations referred to, may change the plans of his predecessor throughout the whole of the workings; also, when a collier is a stranger to the mine, he does not know what part of the mine makes the most fire, nor how and where the old and new workings are situated, in connection with his current place of work; and, until he has been there some time, it cannot be expected that he should do the same work as an old collier accustomed to the mine.

The following suggestions may not be out of place, and will, no doubt, meet the eyes of many, who, like myself (as a coal proprietor), are, and have been, doing all that is in their power to prevent accidents; while I may congratulate myself on having been most fortunate, in not having had, out of several hundred men employed in my collieries, one fatal accident, either in or out of the mine. A master cannot be at every place at the same time; and although blamed by many of your correspondents, yet I think, within the last few years, the art and mystery of mining have progressed and advanced quite equal to any other trade, more especially in the winning, working, ventilating, and getting of the coal and other mines, particularly in the Lancashire district. And as masters can only give the best general instructions to their agents, viewers, &c., the following suggestions, if adopted and acted upon (varying according to the local situation and nature of the mine), will, I feel confident, materially assist in preventing many of the present accidents, which are daily occurring.

First, when new mines, or works, are opened, appoint an underground viewer (or underlooker, as we term it), *not a gentleman*, but a *practical, honest, sober, industrious collier*, that has worked in a mine in the same neighbourhood, who can read and write a little. After consulting with him, and determining upon the best plan to work the mine, let him commence, and carry out that plan; and if faults, &c., do not trouble you very much, carry it out to the end of the works, if possible, by adhering strictly to the principle laid down—not getting a piece of coal here and there, as being nearest to hand, when you get to the bottom of your shaft, making, as it were, so many gasometers, for the accumulation of bad air, fire-damp, &c., &c. Every viewer should be furnished with a plan of the surface of the land, on a scale of 20 yards to an inch, and be taught to dial, and lay, or plot, his workings, which he should do every fortnight, or other measuring-up day, so that both himself and the owner may see the actual workings at one view. After the second shaft (which should be at least 50 yards on the crop of the first), is connected with the first, and the air turned in the right direction, levels should be driven to the boundary, or some fault, or break out, from both the deep and crop pits; and connected again near to the boundary, by a plan of up-brow workings, through which means your air will always be able, at any time, to be turned completely round the whole of your old and new workings—then, by commencing to cut out in straight works, or drifts, according to the nature of the roof (leaving sufficient solid coal to protect and support the air-ways all round), to the extent of one or two acres. After that extent has been cut out, or drifted, commence immediately to bring the pillars back, following your straight works, or as near as would be consistent, until the whole of the coal is worked out to the shaft, except what supports the air and water-roads round the whole of the old and new workings, which may be got out in the end. By these means, all the air-roads round the whole works are open, if required, and at any time can be turned by a door, past the face of the coal, to any part of the workings, leaving nothing but solid coal between the shaft and the workings, all the old works being up to the boundary, or fault—in consequence of which, the collier has no occasion to pass, or repass, through them. On no occasion should foul air, or damp, be "made up," as is very frequently done; if the air is found bad in a particular end, or part of the works, it is usual for underviewers to order it to be built, or stoped up, by setting a row of props, or making a stopping of dirt, &c.—at the same time working, as usual, in other parts of the mine. Now, I have known several accidents through this brutal and unfortunate conduct. Instead of attacking the evil at once, when the workmen are out, and getting the air to work upon it, driving it out, it is frequently made up; and when the first weight, or the adjoining working approaches too near it, or the stopping decays by time, it is so charged, that it forces itself, in a few minutes into the new working, either through the veins, or joints, of the coal, or more generally through the floor and roof of the mine; the foul gas would then fire at the collier's candle, although a few minutes before there appeared no symptoms of it. A small quantity of it would then explode, and blow down all stoppings then made in the mine; and then follows one of those awful explosions that we frequently hear of, by all the foul air so made up exploding in a body. I attribute it to that cause, when I hear of an explosion like the discharge of four or five cannon shots—not all at once, but in successive shocks, yet all in a few moments. It is dangerous, and unprofitable as well, to have too many workings open at the same time; a regular portion of pillars should be got every year, and let it fall as close as you can after being cut out, or drifted. When it can possibly be avoided, never allow your workings to proceed both night and day, as the place of a collier never gets cool; and if the fireman does his duty, he will pay more attention, and see that the air is sent, as far as possible, round the workings, when the men are out; and should, if he sees it necessary, send it with greater force upon that part of the mine producing the most gas; for, after a collier and his drawer has been in his drift, or end, eight hours, the air becomes heated and impure—not only with the gas, but with smoke and their breath; there is, then, 16 hours for the pure air to carry out the foul air. Every underground viewer should, in my opinion, pay quite as much, or more, attention to the air and furnace at night, after the men are out, to see that the air has clear circulation through all the new workings, so that there may be no accumulation during the night, just as if the miners were at work. The state of the atmosphere during fine, wet, stormy, or frosty weather, has a great effect also upon the course of the air in the mines. I have frequently seen so great a change, that in *mines* having a very flat inclination, when the furnace fire was low, that the usual downcast pit has become, in a few hours, the upcast, although the pits have been 300 yards apart, which, in a few hours, again would return to its original course; and it is only a constant attention, and a knowledge of these variations, that can prevent the foul gas from accumulating in certain parts of the mine. There is nothing more distressing to coal proprietors that are anxious to do everything they can, both as regards conforming to the best possible manner of working, and the expense incumbent on the same, whose wishes are to prevent the occurrence of accidents, than the wanton and reckless carelessness shewn by some of the colliers themselves. Many accidents occur which ought never to have taken place—such as leaving a candle burning, neglecting their lamp, and, most of all, neglecting to give timely information to the viewer, or underlooker, of any particular changes in the mine.

When such information is given, the viewer ought to personally examine such parts of the mine reported to him, and destroy, by turning a greater current of air upon that part of the workings, the damp or foul air as much as possible, previous to the miner commencing his usual work, in or near to the same place; but, in general, workings and pits are wholly neglected during the absence of the miners. When the viewer finds that the miners neglect to report to him, he should question and examine them respecting the particular situation in which they are working, by which means he will furnish himself with a great deal of information, which otherwise he would be ignorant of, and, by degrees, get them to regularly report to him. And, further, every viewer should be on good and peaceable terms with the miners, instead of which, you frequently hear of them being completely at variance—consequently, through the viewer and the miners not working together, there is no safety, for much mischief may be avoided by a little forethought and caution on the part of them both. The present existing Act of Parliament prohibits children from working under 10 years of age; and nothing but *education*, and a *general moral training*, when *young*, can give them more *caution* and *respect for the lives* of themselves and their numerous fellow-men. It would be of no service to try to convince the present class of miners; but let the children of the working collier be educated, and taught the value of that existence, which they now so carelessly peril—let the underground viewer be a practical miner, educated sufficiently to feel the responsibility of the situation he controls—then there will be good hopes of reducing the very fearful number of accidents which repeatedly outrage humanity, and ring in our ears as some national and individual criminality. There is no class of labourers more dependent upon each other, or who risk so much—even all that is valuable to them—nor none more dependent on the conduct of their fellow labouring men than the miners. Masters may do everything possible, as to system, management, and general attention to the wants of prevention; but the foundation of the work of improvement must be laid in the school—there to be educated in the plainest manner, and taught the distinctive line between right and wrong, to gain *judgment, caution*, and *confidence*, and to respect, as other men, *the life they now make a wanton and degraded trifle*. This few have an opportunity of seeing; but most men see, and pause upon, the effects produced, without seeing the cause, or placing the remedy to the parts most diseased. A proper application of the education acquired, and working hand-in-hand with a practical viewer, the exertion of the master to organise a system, discharge all seasonable expenses, in order to make the works complete and secure, and make himself acquainted with the same, is the only sure prevention of such lamentable catastrophies. Until these things are effectually done, it is an unnatural and vain anticipation that legislation alone can work the desired effect, and make complete the ventilation and working of coal mines. JOHN DARLINGTON.

Alison Hall, near Chorley, April 21.

ON STEAM PROPULSION—BIRAM'S OBLIQUE PADDLES.

SIR,—I should have less hesitation in communicating, for the gratification of "X. Y. Z.," and others of your readers, who may feel interested in the subject, the opinions I have formed on propelling vessels, if I could feel more capable of intelligibly explaining the result of my experiments. I have certainly thought a great deal upon the subject, and have concluded long ago, that there is much in the action of the ordinary paddle-wheel producing a very disagreeable effect, without at all tending to the propulsion of the vessel, which admits of improvement. This arises from the manner in which the floats strike the water, producing so much splash and commotion, and that unpleasant tremor in the vessel with which we are all familiar; and, when the vessel is deeply laden, depressing by each stroke a volume of water below the natural level, which is again raised above that level as the float emerges—all which requires greater strength of parts, and much more power of the engines, than would otherwise be necessary. At the same time, most of the attempts which have been made to obviate these defects, have been attended with greater complexity of parts, involving increased expense, and greater liability to derangement—so that the common paddle-wheel is still almost universally preferred.

My attention was first drawn to this subject from studying the oblique action of fluids upon rotary engines—such as the sails of a windmill—and also the action of such machines upon fluids, as upon the screw propellor; and the shapes best adapted in either case for receiving an impulse *from*, or giving an impulse *to*, such fluids, as might be required. I felt convinced that the form of a windmill-sail was decidedly defective, by offering an improper obstruction to the wind; and that, if properly formed, the whole of the circle in which the sail revolved, might be beneficially covered with sails, and as much power obtained from the wind, with sails considerably less in diameter.

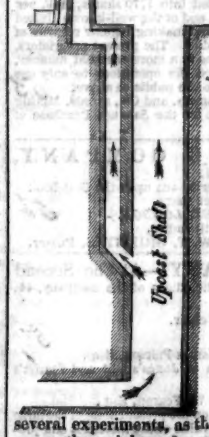
I could not readily test the truth of this by sails acted upon by the wind; but I procured a number of tin models, having vanes set at different angles, and occupying the whole area of the circle; these I immersed in water, in which I had sprinkled bran, which remained suspended in the water; and I found that each of the wheels, when moved through the water in the direction of their axles, revolved without at all disturbing the particles of floating matter, which proved satisfactorily that every portion of the vanes receded from the impulse of the water in the same time that the water passed through the wheel; and that each wheel made one revolution in distances proportioned to the angle at which the vanes were fixed. From this, I concluded that the angle at which the sails of windmills might be fixed, without diminishing their power, admitted of a much wider range than has generally been supposed—that the angle of the sail, with the plane of rotation being small, would give greater velocity, with less power; and the angle being increased, would give greater power, with less velocity—the amount of power multiplied by the velocity being the same in both cases. I also became convinced, that non-elastic fluids in motion, were equally as applicable as a motive power as the wind; and that properly-constructed wheels in our tidal rivers, offered an economical and inexhaustible source of power, available in situations where steam, or wind-power, never could be applied.

I was further led to infer, that such formed wheels would correctly measure the velocity of currents of water or air; and that, if the impulse upon every part of the wheel tended to produce one revolution in the same time, as I supposed, any portion of the wheel might be cut away, and the remainder (the proper shape being preserved), would still revolve in the same time as the whole. This I proved to be the case. I, also, with two differently-constructed wheels—the one making twice the number of revolutions of the other—measured correctly the distance I was drawn along a canal; and with another wheel, more delicately constructed, found that I could measure, with considerable accuracy, the distance I walked along a passage, in which there was no perceptible current. This last instrument, I respectfully recommend as an anemometer, which will meet the wishes of Mr. Storey, and those who, with him, are desirous of ascertaining, from time to time, the velocity of the current of air in mines.

My oblique propeller would be constructed upon the principle I have been attempting to describe; and would, I confidently believe, throw off the water with nearly equal velocity from every portion of the acting floats. It would obviate all the defects I have mentioned, as belonging to the common paddle-wheel—it would be equally simple in construction; no more liable to derangement; lighter; require much less width of paddle-box; and, therefore, offer much less resistance to a head wind at sea: it would work more equally in a rough sea—being, on the one hand, less liable to work out of the water; and, on the other, less liable to choke from too deep immersion.—B. BIRAM: *Wentworth, April 27.*

VENTILATION OF MINES.

A lecture was lately delivered at Lawley Bank, in Shropshire, by Mr. G. Shepherd, C.E., "On Electricity, Light, and Ventilation of Mines:" from the views taken by Mr. S., on the latter subject, he fully explained, that it is not altogether the actual great quantity or force of the atmospheric current that is required to pass through a mine to properly ventilate it; but the arrangements that should be made in the air-courses in opening the works to carry the current of air as near the roof of the mines as possible, because the carburets of hydrogen gas being so much lighter than the atmosphere, is always found to occupy that space, or that part nearest the roof. In the thick coal, for instance, he admitted that in the present system of ventilation, there was generally found a good strong current of air passing along the inlet and outlet gate-roads, which forms the atmospheric circuit through the works, from the downcast to the upcast shafts; but this atmospheric current always goes in the shortest direction possible, and which only passes through the lower part of the works—while the top part of the mine remains full of gas, which that current is unable to remove, and until means were taken to ventilate the top part of the mine, or that part nearest the roof, he, Mr. S., should consider these works unsafe for the workmen. He next proceeded to explain his opinion regarding the pits "fighting for the current," (as it is termed by the workmen), which often takes place when two pits are of equal depth, or otherwise, in this case, he attributes this fighting solely to the sudden increasing and diminishing of the atmosphere at the surface, and also the sudden change of the wind; the one wind being more favourable for the one pit than the other, naturally causes this reaction, which is experienced occasionally. In order to avoid this "fighting" of the pits, which is very dangerous, Mr. Shepherd proposes that a funnel, as shown in the accompanying diagram, should be carried down at the back of the brickwork in the upcast shaft, to the depth of 80 yards below the surface, about 9 ft. area: a chimney should be erected on the top, of 100 ft. high, with a furnace attached (but it is not known, generally speaking, which will be the upcast shaft, and, therefore, he proposes to carry such a funnel down in each shaft, and when it is proved which will be the upcast shaft, there place the chimney): such arrangement as this would, under all changes of the atmosphere at the surface, be a sufficient guarantee to prevent all fightings for the current, as it is termed, and also keep one continual flow of air through the works, and properly ventilate it; when the pits under these changes of the atmosphere are fighting, no fresh current of air is passing through the works, but the same bulk of atmosphere is being driven backwards and forwards—so that, before it can make its escape, it ultimately becomes diluted with carburets of hydrogen, and an explosion is the result, if proper care is not taken. The use of the chimney air-furnace for such purposes has been long enough known, but has not been properly appreciated, nor will it be properly applied, until scientific men, practically acquainted with the laws of Nature, take it in hand—then there will be some hopes of a general system of ventilation. Mr. Shepherd next produced the various gases which constitute our atmosphere and water, with which he performed several experiments, as the formation of water from oxygen and hydrogen gases; the weight and properties of these gases were fully explained. He (Mr. S.) then entered into a very minute detail of the carburets of hydrogen gas—its origin, weight, and properties—and also showed, by several experiments, at what mixtures the explosion is most violent; also, the chemical action which takes place during the combustion, the new and distinct compound that are formed—viz.: water and carbonic acid gas (which is generally termed burnt sulphur), or suffocating damp—which has proved fatal to so many of our fellow-creatures that have escaped the fire, the action of the carbonic acid gas on the human frame, were distinctly explained.—This is the first lecture on the subject that has ever been delivered in the mining district of Shropshire.



ON AN IMPROVED MODE OF WORKING STEAM-ENGINES.

It is well known to engineers, that the space between the piston of a steam-engine at the end of its stroke, and the end of the cylinder, is prejudicial to the working of the engine, by reason of the steam which lodges therein before the initial pressure has been wholly expended upon the piston; it also facilitates the entrance of water with the induction steam. This latter evil, which is technically termed priming, is partially remedied by so arranging the slide-valves that the communication with the condenser may be cut off before the end of the stroke; the unnecessary, or rather injurious space, is then filled with steam, denser than that in the condenser. In order to entirely destroy its influence in single cylinder engines, two conditions will be necessary—viz., 1. The pressure of the steam should be equal to that in the condenser; and 2d—the communication with the condenser should be cut off at the moment when the space which the piston has yet to traverse is in the same proportion to the prejudicial space before mentioned, as the initial pressure is to the pressure in the condenser. In an engine working at a pressure of three atmospheres, the pressure in the condenser being 2-10ths of the atmosphere, and the injurious space being equal to 1-20th of the space traversed by the piston, the steam in the cylinder should be allowed to expand to 2-10ths of the atmosphere; for which purpose, the steam should only be admitted during 1-80th part of the stroke; and the communication should be cut off as soon as the piston has run through 3-10ths of its course. It is practically impossible to comply with these conditions, or even to approximate to them when using a single-cylinder condensing engine. The case is, however, different with single-action engines; for in these, the space containing the motive steam is never in direct communication with the condenser, it being separated therefrom by the piston and by the equilibrium valve. During the return-stroke of the piston the cylinder is not in communication with the condenser, and it would be sufficient to shut the equilibrium valve at a certain portion of the stroke (which is easily determined), in order to compress the steam in the injurious space to the initial pressure: for instance, in a single-action engine, in which the space between the piston at its completed stroke, and the end of the cylinder would be 1-20th of the space run through by the piston, and the capacity of the equilibrium valve-pipe 1-15th of that of the cylinder; the initial pressure of the steam being three atmospheres, and being allowed to expand to half an atmosphere, the equilibrium valve must be shut when the piston has made 0·73 of its stroke: the steam would, therefore, be admitted during one-eighth of the stroke.

It is evident, that if two single-action engines were coupled together, so as to act upon a shaft in the same way as a double-action engine, and was regulated by a fly-wheel, by shutting the equilibrium valves at a certain portion of the return-stroke of the pistons, as above-mentioned, the influence of the injurious space in each cylinder will be entirely done away with; as steam at the initial pressure will occupy such space on the opening of the induction valve, and only that quantity of steam which is introduced into the cylinders at each stroke would be condensed. The resistance produced by the compression of the steam at the end of the return-stroke would be neutralised by the expansion of that steam in the following stroke. In single-action Cornish engines, not coupled, the steam is also compressed at the end of the return-stroke of the piston by the weight of the pump-rods; but the pressure of that steam which merely acts to counter-balance the weight of those rods, is necessarily less than the initial pressure; and, therefore, the injurious effects occasioned by the space above-mentioned is only partially done away with. I have endeavoured to apply the principle of compression of the steam in the injurious space to the double-cylinder engines, commonly called Woolf's engines, which are now again coming into use, and would never have been abandoned if the details of their construction had been properly studied. In order to neutralise the influence of the injurious space in the small cylinder, it will only be necessary to cut off the communication between the opposite ends of the small and large cylinders, when the former contains a quantity of steam, sufficient to fill that space at the initial pressure. The position of the piston when this communication is cut off, will depend in each case on the size of the injurious space, and the portion of the stroke during which the induction aperture was open. The passage of the steam being thus cut off at the required time, there will be no other loss occasioned by the injurious space than that which results from the expansion of the steam when the opposite ends of the two cylinders are put in communication with each other at each stroke of the piston; and this loss may be diminished by filling the steam-pipes with steam, at a pressure higher than that which acts on the working piston at the end of the stroke. The drawings accompanying the memoir, show the general arrangement of the valves in a double cylinder engine, of from 20 to 30-horse power, constructed by M. Farcot, according to the improved plan. The exit of the steam from the small cylinder may be stopped by adapting three pistons to one rod in a vertical cylinder. These pistons are displaced at convenient times by tappets on a rod, and these tappets may be adjusted to suit the working of the engine. At each end of the large cylinder, two double-seated valves are adapted; the one for the entrance of the steam is placed at the extremity of the pipe leading from the cylinder; the other for the exit is placed at the extremity of a large pipe leading to the condenser. According to the dimensions of this engine, the passage of the steam from the small into the large cylinder must be intercepted, when 8-10ths of the stroke have been performed, if the steam is admitted into the small cylinder during the whole of the stroke; 6-10ths if the steam is admitted during half the stroke; and 4-10ths if steam is admitted during one-quarter of the stroke. It is also advisable to shut the induction valve into the large cylinder, after the passage of the steam is cut off, in order that the communicating pipe may be full of steam at a pressure superior to the final pressure; and that the loss, owing to the expansion of the steam, on putting the opposite ends of the two cylinders in communication, may be as small as possible. For an initial pressure of three atmospheres, a pressure in the condenser of 1-10th, corresponding to a temperature of 46° centigrades, and admission of steam during a quarter of the stroke of the small piston, a calculation would give the advantage resulting from the new arrangement, of an increase of power over the ordinary plan equal to 5·8 per cent. The advantages of the improved plan increase with the extent of expansion, and with the relation of the initial pressure of the steam admitted to that in the condenser. The economy effected, appears to be greater than calculation would seem to imply, on account of the favourable circumstances resulting from the existence of compressed steam between the piston and the end of the cylinder at the moment of opening the induction valve.

In the note presented by me to the academy, I have shown that by a certain arrange-

ment of Woolf's double-cylinder engines, as proposed in my memoir, the steam passages may be enlarged without diminishing the power produced by the initial pressure of the steam; and also without losing much of the power produced by the expansion of the steam on first acting upon the pistons from the communication pipe between the two cylinders. The advantage of enlarging these passages is well known, as it will diminish the counter pressure upon the small piston. I chose, for experiment, an engine in which the capacity of the small cylinder, and of the pipe, which serves for the entrance of the steam into that cylinder, and for its passage into the other cylinder, would be equal to 1-10th of the small cylinder, or 1-35th of the large cylinder; the capacity of the remainder of the communicating pipe would be equal to about 1-35th of the large cylinder; the pressure in the condenser, or rather behind the large piston, would be 1-20th of the initial pressure. The comparative tables of the extent of power calculated relatively to a certain expenditure of steam in an engine, constructed on the ordinary plan, and another on the improved plan, give an advantage of 13·6 per cent. in favour of the latter, where the steam expands to 18 times its original bulk; and the advantage is 6·2 per cent., when the steam is admitted into the small cylinder during the whole of the stroke, and only expands to 3½ times its original bulk, before entering the condensor.—M. Combes: *Comptes Rendus—Newton's London Journal.*

Importation of Copper Ore.—In the House of Commons, last night Mr. Muntz gave notice, that on Thursday next, the 18th inst., he should move that the House resolve itself into committee, on the duties imposed on the introduction of copper ore into this country, with a view to their total abolition.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The next MEETING will be HELD at OXFORD, and will commence on WEDNESDAY, the 23d of JUNE, 1847. 53
JOHN TAYLOR, F.R.S., General Treasurer,
2, Duke-street, Adelphi, London.

TO MINING ADVENTURERS.—DESIRABLE MINING PROPERTY IN MERIONETHSHIRE, NORTH WALES.—TO BE DISPOSED OF, ENTIRE or LET, for a term of years, all that valuable property, known by the name of MAES-Y-CLADD, containing, by admeasurement, 146 A. 2 R. 14 P., or thereabouts, with the minerals under the same. A lode of the purest copper has just been discovered, which, if worked, would make an immense return. The public may rest assured this is no puffing—as an inspection (which is particularly desired) would indnce the most timid to purchase; it is solely owing to pecuniary difficulties that the present owner now offers it for disposal. It may be well to add, that the distance from a shipping quay is only a mile and a half.—For terms, and further information, apply to Mr. C. Lewis, mine agent, Barmouth, who will show the property. 51

WHEAL BEAM TIN MINE, DEVON.—CONDUCTED ON THE COST-BOOK SYSTEM.
This promising mine (now in 118 shares), to be divided into 1770 shares, at 6l. per share, extends over about 700 acres, and joins the western end of the well-known United Ashburton Consols Mine. It is in full course of work, and making regular returns of tin—upwards of 5000l. value of which has been disposed of. The present proprietors, being only four in number, are anxious to work the mine in a more effectual manner, and upon a more extended scale, having hitherto confined the operations to only one lode; they, consequently, offer one-half of their interest to the public as above. 55
For prospectuses and shares apply to Crossman, Sommers, and Co., agents, Mining Adventurers' Subscription Room, and Sale Registry Office for the Sale and Purchase of Mining Shares, 28, Threadneedle-street, London.

NORTH WALES MINING COMPANY,
COUNTY OF MERIONETH.
Divided into 12,500 shares, limited to £10 each, and carried out upon the Cost-book System, with a deposit of £2 10s. per share.
OFFICES, No. 2, NEW BROAD-STREET, LONDON. 56
Applications for shares and prospectuses to be made at the office.
W. T. GRIFFITHS, Purser.

LLANCYNFELIN MINING COMPANY.—At the Second Annual General Meeting of shareholders, held at the offices of the company, 44, Finsbury-square, on Friday, the 7th day of May inst.,
PETER STAINSBY, Esq., in the chair. 57
The report of the directors having been read, it was
Moved by P. Stewart, Esq., and seconded by James Peirson, Esq.,
That this meeting recommend the present prosecution of Jones's adit and Fearon's shaft; also the returning the halvans now on the mine.
Moved by W. Fawcett, Esq., seconded by A. W. Fearon, Esq.,
That a competent gentleman be engaged to report fully on the present state of the mine and its future prospects; also, to give an estimate of the value of the materials and property now on the mine, in conjunction with Mr. Johnson.
PETER STAINSBY, Chairman.
Thanks were then passed to the chairman, and the meeting adjourned.
44, Finsbury-square, May 7, 1847.

WHEAL ANDERTON MINING COMPANY.—At a Meeting of adventurers, held at the Royal Hotel, Plymouth, on Monday, 3d of May, 1847.
T. W. LISCOMBE, Esq., in the chair, 58
It was moved by Mr. P. Fisher, and seconded by Dr. Yonge,
That the accounts having been examined, and found correct, be, therefore, passed.—Carried unanimously.
Resolved,—That the report of Mr. J. Hitchins, also that of Capt. Carpenter, having been read, such are considered very satisfactory to this meeting.
Resolved,—That a call of £2 per share be now made, for the liquidation of the debts, and further prosecution of the mine—to be paid Capt. Carpenter immediately.
Resolved,—That Capt. Carpenter be requested to begin sinking the engine-shaft toward the 70 fathom level at the earliest possible period.
Resolved,—That five adventurers be appointed auditors of the accounts previous to the next meeting—namely: J. E. Mare, H. Seaman, P. Fisher, J. Foy, and J. Paull.

SMITH AND ENGLISH (LATE ANDREW SMITH),
PRINCES-STREET, LEICESTER-SQUARE, LONDON,
ENGINEERS, MACHINISTS, IRON AND BRASS FOUNDERS, &c., 59
PATENTEES and MANUFACTURERS of Improved Steam-engines, Rapid Steam Generators, Railway Wheels, Rails and Chairs, Propellers for Canal and River Navigation
ROPE-MAKING, FLAX-DRESSING, AND OTHER MACHINERY,
Raising and Lowering Machines, Wharf, Warehouse, and Truck Cranes, Tramway, Traversing and Stationary Purchase Crabs, Tackle, &c.—Also, Steam-engines and Boilers, of various constructions; Bone, Sugar, and Mill Work, and Machinery of every description manufactured and repaired; Saw-mills, Breweries, and Factories attended.
Planing, Boring, Turning, Screw-cutting, &c.

BY HER MAJESTY'S ROYAL LETTERS PATENT. 60

HOT-BLAST.—The NEW METHOD of HEATING AIR for BLAST-FURNACES (which has been PATENTED by Messrs. DIXON and BUDD), is now in ACTIVE, and most successful, WORKING at the YSTALYFERA IRON-WORKS, near SWANSEA, where it has been applied to six furnaces.
The plan is free from complication; the heating stoves, through which the air-pipes pass, are built adjoining the furnace; the flame of the furnace itself is drawn through the stoves by a stack, and the air thereby heated without any expense of fuel or labour.
The patentees, being ironmasters themselves, know that no saving in first cost, coal, or labour, would be considered by the trade as a compensation for frequent repairs. They also know that in many instances the whole benefit of the hot-blast process, and in some instances more than such benefit, has been swept away by the cost and irregularity attendant on the repairs of the apparatus. But they can assure the trade that their apparatus is not liable to get out of order. At the Ystalyfera Iron-Works the hot-blast pipes that were put to work in October, 1844, are still at work and in good repair. They believe that there is nothing in the whole experience of the trade equal to this duration; but more than this, they are sanguine that where their improvements are carried out under their instructions, the stoves will last longer than the furnaces. At the Ystalyfera Iron-Works, near Swansea, six furnaces may be seen in operation, the blast being perfectly heated to the point of melting lead, by the plan of the patentees applied to five heating stoves. The dampers on the stacks afford the means of moderating the temperature, whilst the doors in front give a perfect command of the stoves, as the draft can be reversed, and a current of cold air introduced at a moment's notice.
The patentees now introduce their improvements to the notice of the Iron Trade, with the confidence arising from continued and successful practice. They preferred the delay of waiting until they were in this strong position, rather than to call the attention of the trade to their plans, whilst they were in a state to which all practical men have a well-grounded aversion—viz., that of an experiment.
The patentees confidently assure the trade that their patented improvements possess the following advantages:—
1. The first cost of erecting the apparatus is considerably less than of that usually employed.
2. The liability to get out of repair is much less.
3. The temperature of the blast can be preserved higher and more equal.
4. There is no cost of coal or labour—neither being required.
5. The working of the furnace is not at all interfered with.
6. The stoves can be readily cooled down without derangement of the apparatus, when cleaning or repair is required.
As the benefits arising from the adoption of the plans of the patentees amount to several shillings a ton of iron made (a most important consideration in these times of competition, especially where large quantities are made weekly), besides great comfort and regularity, the patentees respectfully invite the attention of the trade to the subject. In order to ensure an early and extensive use, they have resolved on making a very moderate charge only for their patent right.
As the hot-blast apparatus at present in use, requires such frequent renewal and repairs, opportunities will occur in every iron-works, within a short period, of introducing the plans of the patentees without any, or with only a small additional, charge as dead outlay.
The patentees, therefore, congratulate themselves on being enabled to present to their brother Ironmasters a plan by which all the benefits of the hot-blast process may be secured, free from the hitherto great drawbacks of current expenses and repairs. They have not attained this end without great cost and perseverance, and they look for a liberal support from the trade, now that they present their improvements in the manufacture of iron, free from all the doubt and risk of an experiment.
Every information will be afforded to intended licensees by J. Palmer Budd, Esq., of Ystalyfera, near Swansea, who will, if necessary, send an experienced person to superintend the construction of stoves, and the successful carrying out of the plan.

IMPORTANT TO RAILWAY COMPANIES. 61
PATENT KAMPTULICON COMPANY, 18, CORNHILL.
This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.
By order of the board, P. Q. GREVILLE, Secretary.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY, 62
23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

BRUNTON'S PATENT ORE-DRESSING FRAME.—These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption. The following gentlemen can certify as to their utility:—Thos. Bolitho and Sons; P. N. Johnson, Esq.; Capt. Jos. Vivian, Cook's Kitchen Mine; Capt. R. Kernick, St. Ives Consols; Capt. R. Edwards, Wheal Franco; Capt. W. Teague, Wheal Grey; Capt. James Miners, and Capt. Matthew Rogers, Carn Brea Mines. 63

THE PATENT SAFETY FUSE,
FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this." 64
Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Gwennap, Cornwall.

PATENT GALVANISED IRON AND WIRE ROPE WORKS,
MILLWALL, POPLAR.
ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £30, under the ordinary process. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.—Mr. I. T. Tregellas, Truro, agent for Cornwall. 65

CRAIG DDU SLATE COMPANY.—The DEED OF SETTLEMENT of this company being now before the REGISTRAR, prior to complete REGISTRATION, any further APPLICATION for SHARES should be immediately made, the directors being about to proceed to allot.—Address to the secretary, at the office of the company, 35, Moorgate-street; or to the solicitor, Mr. F. Farrar, Doctors' Commons. 66

PERRANZABULOE SILVER-LEAD MINE COMPANY.
(ON THE COST-BOOK SYSTEM),
In 512 shares.
Bankers—Sir J. W. Lubbock, Bart., and Co., 11, Mansion-house-street.
Secretary—Mr. W. H. Smith.
OFFICES—No. 10, WARNFORD-COURT, LONDON. 67
This mine is situate on the well-known mineral Penhale estate, in the parish of Perranzabuloe, in Cornwall; and, during its last working, has had the advantage of a beneficial outlay of capital, to the extent of at least £18,000, chiefly in underground works and operations. By means of this outlay, the permanent riches which this mine contains were fully established by the increase of its returns in 1821, from 7 tons per month to 50 tons at the time of its suspension; and which event was ascribable to no other cause than that of unfortunate disputes—branching out of other matters in litigation between the then proprietors of the mine—added to then low price of lead.
At the time the above mine ceased working, it was not contemplated that its suspension would have been of any duration; and, owing to this circumstance, the underground materials and works were left in their perfect state for future recommencement of operations. To these benefits and advantages, which may be fairly estimated at a saving of £18,000 in capital, for works in a complete state, and of a period of five years in time in performing those operations, the present proprietors have become the lawful successors.
In the formation of the present new company, however, the lessees propose to admit of the accession of co-adventurers on terms of equal participation with themselves in all the foregoing advantages, and to place the mine in the hands, and under the management, of the said proposed new company, on the most satisfactory and liberal terms.
For this purpose, therefore, it is proposed to divide the mine into 512 shares; and it is calculated that the capital required to set the mine into complete operation, will be about £5000. The lessees consent to accept of £500 for their interest in the same, there being upwards of that amount of property now actually on the mine. The lessees propose taking 100 shares, upon which they will pay equally with the other adventurers.
£2 10s. per share, on the transfer of shares, will be required; and calls will be made, not exceeding £2 10s. per share, at intervals of not less than three months (of which one month's notice will be given), for carrying out the future operations of the mine.
A committee of management will be chosen out of the adventurers at their first general meeting.
Application for shares to be made to the secretary, at the office of the company, 10, Warnford-court, Throgmorton-street, City; where copies of the detailed prospectus, with report and plan, may be had; also at the office of the *Mining Journal*, 26, Fleet-street.

ALBERT ADVENTURE—NOW IN WORK, ON THE COST-BOOK PRINCIPLE.
In 1000 shares.—Deposit 5s. per share. 68
This LEAD and COPPER MINING ADVENTURE is situated in the parish of Ewiness, Cornwall, at about half a mile north-east of Alfred Consols, now a productive and very valuable mine. The extent of ground comprised in the Albert setts measures three-fourths of a mile along the course of the lodes, from the west to the east boundary, and one-third of a mile in breadth, north and south.
This ground has been long well reported of, as containing several lodes. The manager of the Great Wheal Alfred often expressed his opinion that extensive and profitable mining operations would be witnessed here.
Some years since a company was formed, and a mine was opened, under the name of "East Wheal Alfred;" an adit was brought into about the centre of the sett, and cross-cuts to considerable extent were driven; several promising lodes and branches were discovered; and it was unanimously agreed on, forthwith, to erect a steam-engine; the requisite shaft was sunk to about 18 fathoms; materials for building the engine-house were brought on the spot; shares were selling at advancing premiums; when, owing to certain disagreements amongst the parties concerned, further proceedings were abruptly stayed.
The operations of the said company, done at considerable expense, may be justly regarded as a valuable locus to the new adventurers.
An efficient and encouraging inspection of the mine has been obtained; and, preparatory to ascertaining the most eligible position for the erection of an engine, it is advised to drive a cross-cut, in order to the inspection of a lode in the south part of the sett, which was partially seen during the former working, and exhibited favourable indications near the surface.
An extract from the report of Capt. W. Paul, manager of the Tincroft and other mines in the neighbourhood, thus states, respecting the lode first cut by East Wheal Alfred adventurers, and thought to be a continuation of Great Alfred lode:—"This lode is two, and a half feet wide; I consider it a kindly lode." And of the other lodes he thus reports:—"In the cross-cut north I discovered several branches, strongly mineralised. From one vein of lead I took some good stones, which, I think, contain silver. The north lode is 20 inches wide; contains mundic and lead, and is spotted with copper ore. I have a favourable opinion of this lode, as the branches and lodes to the south contain the same sort of mineral, and, from their inclination, will fall in with it in depth; indeed, the cross-cut, for several fathoms in length, is strongly mineralised, and the ground very cheap to excavate. Had there been no other lodes in the sett but those discovered, I think any company would be justified in erecting an engine of sufficient power to develope their resources."
Already the adit, the shafts, and cross-cuts, have been all cleared; a horse-whim is now erected on the main shaft; four men are set to drive south, to cut the extreme south lode, as advised by Capt. Paul; four others are opening on the lead branch, from which Capt. Paul selected the favourable specimens noticed in his report. Two men are contaaing at about 300 fathoms east of the present workings, where they have discovered some favourable strata, containing promising gossan and quartz.
A correct review of all the circumstances of this adventure, certainly justifies the necessary outlay to prove it thoroughly.
One plain and important fact should be specially regarded—it is this, that the north lodes incline south, and the south lodes north; and, from the west boundary, the direction of the lodes evidently indicates a junction in the eastern part of the sett. The presumption, then, obviously is, that, in depth and in extending east, a junction will be witnessed—the result of which probably will be, a valuable remuneration for the outlay made in the discovery.
£5000 may be required, for the necessary mining operations, effectually to prove the said lodes; but it is no improper suggestion, as matter of legitimate hope, that, ere the outlay of half the said capital be called for, the adventure may be marketable at a valuable premium.
This concern is divided into 1000 shares; the deposit, of first call, 5s. per share; the circumstances of progression will determine the time and amount of the next and future calls.—The plain and safe Cost-book System will be adopted, and the strictest regard to the appropriation of the capital to actual underground operations, will be economically adhered to by the managers.
Applications for shares are to be made to Mr. James Lane, sharebroker, 75, Old Broad-street, London: the Purser, Mr. F. Harvey, Hayle, Cornwall; or the London Secretary, Mr. W. Witcomb, Johnson's Chambers, 161, Fleet-street, London, of whom the prospectus may be obtained.—The prospectus can also be had at the office of the *Mining Journal*, 26, Fleet-street, London.

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.
Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their IMPROVED PATENT ELASTIC METALLIC PISTONS. 69
The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is
1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.
2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.
3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.
Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.
Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

STEAM COAL—WITHOUT SMOKE, as per experiments made at her Majesty's Dockyard, Woolwich.
CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.)
OFFICES—2, MOORGATE-STREET, LONDON. 70
The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

GENERAL COMPANY FOR PURCHASING AND CLEARING THE WASTE LANDS OF FRANCE.
Under the auspices of the Minister of Commerce and Agriculture, and honoured by the concurrence of the Peers of France, Deputies, and the leading Agriculturists.
SOCIETE EN COMMANDITE.
Created under the joint-company of L. G. MAGNANT & CO., according to the agreement entered into before M. Fould, notary at Paris, the 19th December, 1846.
Social, or joint, capital 20,000,000 fr. (£800,000), divided into 200,000 shares, of 100 frs. each (£4); one-half of the capital (10,000,000 frs.) is only called for, as it is stated in the Tenth Article of the Act of the Company.
The shares will be payable (3l.) by fifths, from month to month, and will bear interest at 5 per cent. per annum, payable half-yearly. The capital is secured by the lands purchased for the profit of the company. The sums arising from the sale of shares will be deposited at the Bank of France, within three days after being paid in, and cannot be withdrawn, but for paying off the purchases, and the necessary expenses for the improvement of the acquired lands, and that only under the signature of the chairman and two members of the council of management. The company has entered into a negotiation for the concession of the Marais (fen) of Cotentin, the property of Louis Philippe. The company will be constituted by the subscription of 40,000 shares, that is 2,000,000 frs.
COMMITTEE OF INSPECTION, OR MANAGEMENT.
BUGEAUD (Marshall), Duc D'Isly, Count Guy de la Tour Dupin.
KLBEE (Marquis of), late Colonel-Chevalier of St. Louis and Malta, Officer of the Legion of Honour.
LEFEVRE (Elysée), Editor of the Agricultural Bulletin of *La Presse.*
REGNAULT DE LA SOUDIERE, late Receiver-General of Finances.
NOGUES (Viscount of), Chevalier of the Legion of Honour, Agricultural Proprietor.
ROSTAING (Marquis of), Chevalier of the Legion of Honour.
Count de la TOUR D'AUVERGNE. 71
TREMAULT (Baron of), Chevalier of St. Louis, Proprietor.
COMMITTEE OF AGRICULTURE.
LEFEVRE (Elysée), Editor of the Agricultural Bulletin of *La Presse.*
EDOUARD DUBAC, Agriculturist.
VERDIER, Agricultural Proprietor.
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DE PLEVILLE, Agriculturist.
REY DE MORANDE, author of the New Theory of Vegetation.
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DE MOLEON, formerly Pupil of the Polytechnic School, Civil Engineer, Chevalier of the Legion of Honour, &c. &c.
PARETO, Civil Engineer.
JUDICIARY COUNCIL.
BERRYER, Advocate, Member of the Chamber of Deputies.
ROYER-COLLARD, Dean of the Faculty of Law of Paris.
FOULD, Notary.
DELACOURTIE, Advocate at the Royal Court.
MOUILLEFARINE, Advocate of the First Instance.
DURMONT, attached to the Tribunal of Commerce of Paris, Chevalier of the Legion of Honour.
FIEVEE, Chevalier of the Legion of Honour, Government Engineer, charged with the composition of the *material* of the company.
Broker of the Company.—M. BOILEAU.
France required more than in one point the creation of a company such as that which has just been formed, under the direction of a man who has studied during 15 years all the great questions relating to this vast national undertaking. The moment has arrived to reassure the country on the fears which the continued high price of grain too much justifies. It is to this work—as great as it is requisite, as certain as it is profitable—that we invite the attention of all men of intelligence and capacity. Here every thing has been studied and seriously matured; the price of shares even, is a proof of what we set forth. Therefore, we were desirous that a company, founded above all in the interest of the masses, should doubly profit in masses; it was then that we agreed that our shares should be 100 frs. (4l.), only half of which sum is called for by fifths, from month to month—so that the labouring man, who every week takes the produce of his savings to the savings bank, might find in our company an interest more in connection with his wants, above all, in consequence of his small capital. We will say nothing of the security which our company offers; the names of the honourable men who form the committee of management, speak high and loud, and the undertaking itself will cause the social stock to quintuple in a short time. Lastly, the guarantees which we offer to all, repose on the purchased soil becoming the property of the shareholders. Very important concessions of lands are already offered to the company. The statutes of the company are distributed free, on a written application to the administration. The shares are subscribed for at the offices of the company, 51, Rue de la Madeleine; for the provinces and abroad, the applications must be sent free of postage, with a written engagement, and the first fifth, by a post-office order, or an order at sight on Paris.

UNITED KINGDOM ARTESIAN WATER COMPANY,
Capital £500,000, in 50,000 shares, of £10 each.—Deposit 7s. 6d. per share.
Provisionally Registered, pursuant to 7 and 8 Vic., cap. 110; and Notices, Specifications, &c., for an Act of Incorporation, served on the Woods, Forests, and Land Revenues, *Pursuant to 9 and 10 Vic., cap.* 106.
PATRONS.
The Most Noble the Marquis of NORTHAMPTON, Belgrave-square.
The Right Hon. Lord ASHLEY, Upper Brook-street, Grosvenor-square. 72
TRUSTEES.
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BENJAMIN BOND CABBELL, Esq., M.P., St. Alban's, and Portland-place.
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(With power to add to their number.)
BANKERS.
London Joint-Stock Bank, Princes-street, Bank; Commercial Bank, Bothbury.
SECRETARY—Joshua Stopford.
ASSISTANT SECRETARY—William St. George Graham.
21, East India Chambers, Leadenhall-street.

PROSPECTUS.
When we look to the vast population, and consider the enormous, the trade, the enterprise, the great manufacturing and commercial interests of this metropolis, it becomes a matter of no little surprise that the most active means have not, long since, been taken to obtain a better supply of water, and to get rid of the mud and water monopoly which has so grievously existed for many years past.
The subject is one upon which so much has been said, and such universal complaints made, that it is altogether unnecessary to dilate upon the crying evil, or to offer a single remark beyond that which is rendered so self-evident to every disinterested and dispassionate mind.
Of the eight companies supplying London with water, the New River is the most extensive. It was constructed by Sir Hugh Myddleton, at an expense of about £150,000. When, in 1843, the public were much excited in consequence of the bad water supplied, a Parliamentary inquiry on the subject took place, and Commissioners were appointed. From the evidence then given, it appeared that the capital invested by the New River Company was £1,116,964, by the other companies £3,197,496, making a total of £3,294,560. Although the New River Company paid an enormous bonus (300 per cent. on the paid-up capital) yearly to the shareholders, there was a balance of £157,236 10s. 6d. remaining, which is more than the original cost of construction. The average number of houses supplied in 1834, according to the minutes of the evidence, was 196,422, at the annual value of £276,200, about £1 10s. yearly per house. Pure water can be supplied for one-third that sum, and leave a profit to the capitalist, who invests in this speculation, more enormous than that of the New River Company.
Hence the opportunity has presented itself for the formation of a company for the supply of pure water at an inconsiderable outlay, and upon those sure and unerring principles of artesian springs, which have been so generally adopted on the continent—unfailing and successfully established to the satisfaction of the most sceptical individuals.
So certain and conclusive have been the experiments tried, that the most successful result has attended every instance in procuring water upon the principle stated.
All applications for shares must be addressed to the secretary of the United Kingdom Artesian Water Company, at the offices, East India-chambers, Leadenhall-street, City London; and to the following brokers:—Messrs. Lamond, Smale, and Lamond, Threadneedle-street; J. T. Berkeley, Esq., 18, Threadneedle-street; W. H. Collis, Esq., Birmingham; Messrs. A. Moffat and Co., York-place, Edinburgh; A. Mercer, Esq., Perth; T. S. Ferrybrough, Esq., Manchester; Messrs. Powell and Lownds, Liverpool; Messrs. Warburton and Crossland, Sheffield; T. S. Holland, Coventry; Messrs. Kirk and Co., Leeds; Messrs. Campbell, Dublin; Messrs. Tugg and Hodgson, Hull; F. Dixon, Esq., and Messrs. H. and W. A. Tassie, Glasgow.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1843. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 73
DENT'S PATENT DIPLEIDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

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PATENT CONCENTRATED MALT AND HOP EXTRACT enables PRIVATE INDIVIDUALS to MAKE 74
FINE HOME-BREWED ALE,
WITHOUT EMPLOYING ANY BREWING UTENSILS.—It has only to be dissolved in hot-water and fermented.—Sold, in jars, for medicinal and other purposes, at 1s. and 1s. 6d.; and in bottles for brewing 9 to 18 gallons and upwards of ale, at 2s. 6d. and 12s. 6d. each, by the
BRITISH NATIONAL MALT EXTRACT COMPANY,
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Also, just published, and may be had gratis,
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26, Fleet-street, London.
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